NOVEMBER, 1892.]

THE

TRANSACTIONS

OF THE

ROYAL IRISH ACADEMY.

VOLUME XXX.—PART I.

ON THE TUMULI AND INSCRIBED STONES AT NEW GRANGE, DOWTH, AND KNOWTH. By GEORGE COFFEY, B.A.

PLATES I. TO VI. AND MAP.

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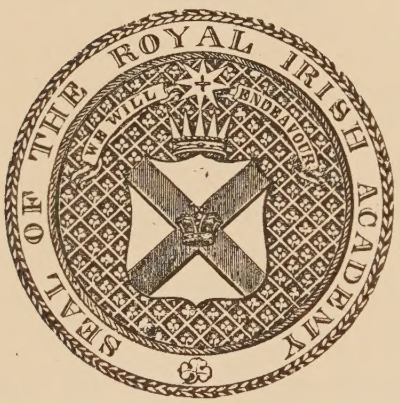

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MAP

OF THE

DISTRICT EMBRACING NEW GRANGE, DOWTH, AND KNOWTH.

Reduced to Scale from the Six-inch Ordnance Survey.

TRANSACTIONS

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ROYAL IRISH ACADEMY.

I.

ON THE TUMULI AND INSCRIBED STONES AT NEW GRANGE, DOWTH, AND KNOWTH.* By GEORGE COFFEY, A.I.B. (Plates I. to VI. and Map.)

[Read November 29, 1890, and November 9, 1891.]

FIVE miles west of Drogheda, and thence extending about three miles along the northern bank of the Boyne towards Slane, are the remains of probably the most remarkable of the pre-Christian cemeteries of Ireland. The accompanying map, reduced from the six-inch Ordnance Survey, shows

* The following pages are the outcome of some ten or twelve visits to New Grange and Dowth during the years 1890 and 1891. On some of these I was accompanied by Mr. L. R. Strangways, to whose experience in photography the success of the undertaking is in a great part due. To Mr. T. F. Geoghegan I am also indebted for many useful suggestions and for the kind interest he has taken in the photographic portion of the work. I have further to thank Mr. J. H. Pentland, F.R.I.B.A., for assistance in measuring New Grange and Dowth, and for the admirable plans and sections he has kindly prepared for illustration. The drawings of details, with few exceptions, are from photographs. In some cases, where the space was very limited, the stones were photographed in sections so as to secure a photographic record of the entire of the inscribed surface. In preparing the illustrations I have, in all cases, taken them direct from the negatives, which gave more certain indications of detail than the prints. A magnesium lamp was used in photographing the interiors, and the exposure varied from about one and a-half to two and a-half yards of magnesium ribbon, according to the usual photographic conditions. Plates of ordinary rapidity were used.

the positions of the existing sepulchral mounds, standing stones, and raths within the group. The cemetery has been identified as the *Brugh na Boinne* of the manuscripts, more particularly described in the *Senchas na Relec*, or History of the Cemeteries, preserved in the Leabhar-na-h-Uidhri, and in the *Dindsenchus* of the Book of Ballymote.

For the present it is proposed to discuss these remarkable tumuli, presenting in their inscribed stones probably the most important examples of that class of Rude Stone Monuments in Europe, solely from the standpoint of prehistoric archæology. Subsequently the historical evidence bearing on the question of the identification of the cemetery will be considered, which may support or modify the conclusions we shall have independently reached.

I.—NEW GRANGE.

Of the three principal mounds, at Dowth, New Grange, and Knowth, situated about a mile apart, and in sight one from the other, that at New Grange is the largest and best known. I shall therefore take it first. The cave or chamber of this tumulus has been open since about the year 1699, when it was visited and described by the Welsh antiquary, Edward Lhwyd. Since then it has attracted the attention of many archæologists on the Continent as well as in these islands. The notices hitherto published are, however, very unsatisfactory, and no apology is necessary for the present detailed description of the monument, although we traverse, at times, ground already broken by previous writers.

The tumulus has suffered much from dilapidation, and, as the earlier descriptions differ on points of detail, it is desirable to recover, as far as possible, from a comparison of previous accounts, the state of the mound and chamber when first entered in modern times. A general description of the monument in its present state will, however, enable the reader to follow the discussion more readily, and will probably be at first more acceptable.

As seen from the road the appearance of the mound is rather disappointing. It is overgrown with trees and bushes which obscure its outline, and lend to it the character of one of the many wooded knolls of the

surrounding country. Moreover, the rising ground on which it stands foreshortens its lines and takes from its apparent bulk. Indeed, the great

Fig. 1.—Tumulus at New Grange.

size of the monument cannot be realized until the visitor has walked round it.

The tumulus appears to have been originally surrounded, a few yards outside the base, by a circle of standing stones, twelve of which may still be traced (see Plan, fig. 2). Four of these stones, forming portion of the circle near the entrance, are of great size, measuring, respectively, in height, 7 feet, 6 feet 8 in., 8 feet, and 6 feet above the ground, and in girth 18, 20, 19, and 15 feet. These four stones are shown in the above cut. The rest are smaller, in some cases but a foot or two above ground, with the exception of one on the east side, which appears to have fallen down, and is now level with the surface—it measures 11 feet in length. The interval between the three stones at the entrance, where the circle appears unbroken, measures 30 feet from centre to centre, and will be found to go, with approximate accuracy, evenly into the distances between the other stones, giving about thirty-five stones to the circle. It is possible that the circle

was never completed; but the regular manner in which the existing stones are placed would indicate that they have not been set up at random, but

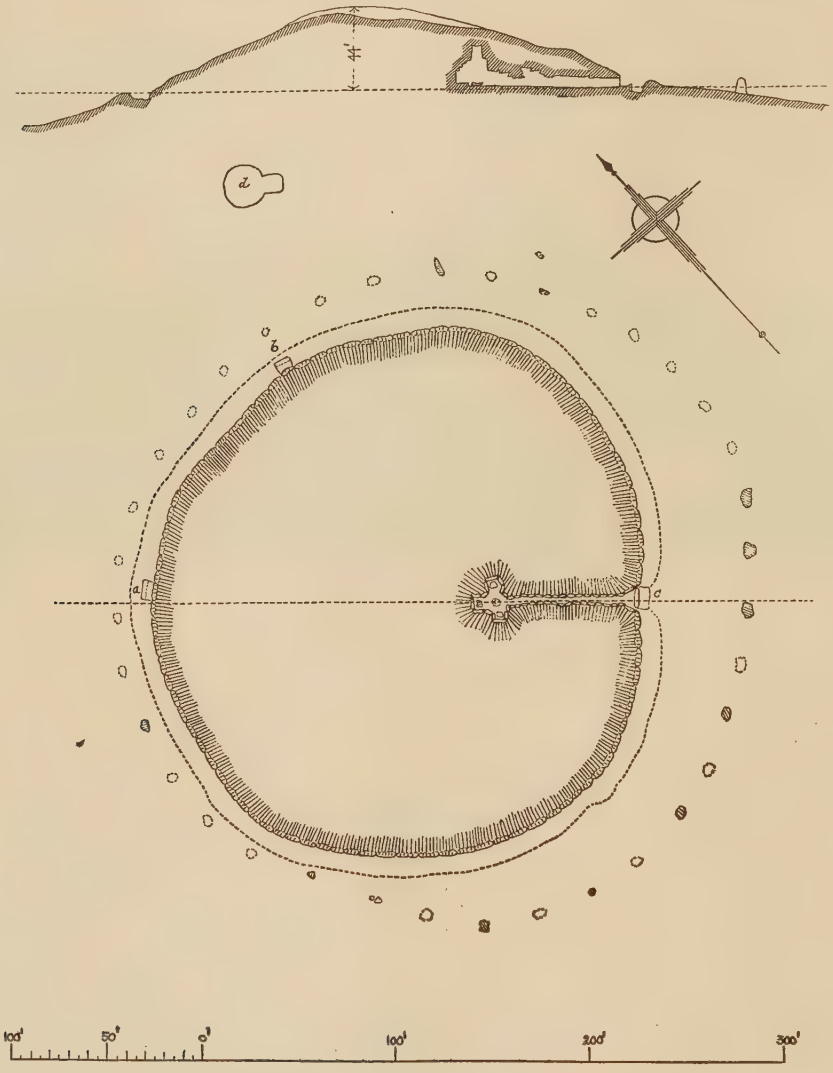

Fig. 2.—Plan and Section of Tumulus at New Grange.

form portions of a circle which originally consisted of, or was laid down for, thirty-five stones.

Inside this circle a ditch and rampart, mainly of loose stones, runs round the base of the mound. It is difficult to say whether or not it is

part of the original structure. For the greater part of the circumference it is well defined, but less so at the east side, for a portion of which it may be said to cease. The well-marked and regular outline of this feature would seem to point to its being part of the original design.

The mound or tumulus itself consists of an enormous cairn of loose stones, heaped within a curb of great stones, 8 to 10 feet long, laid on edge, and touching end to end, over which a thin covering of grass has grown. A similar arrangement is found at Dowth, and in the cairns of the Loughcrew Hills. In plan the tumulus is circular, and covers an area of about one acre, or, taking the circle of the standing stones, nearly two acres. The greatest diameter of the mound measures 280 feet. Its present height is 44 feet (see Plan and Section, fig. 2).* The somewhat flattened top, also found at Knowth, is not an unusual feature in such structures. A retaining wall, or revetment of dry rubble, some five to six feet high, is built immediately on the base stones, and is deserving of notice. It is, again, hard to say whether this is an original feature. It is difficult to believe that anyone should have taken the trouble to build this wall at a later time. It is not necessary for stability, any more than at Dowth and Knowth, and must have involved considerable labour, and though an exceptional feature, it may be urged that the tumulus is exceptional in other respects. On the other hand, this wall partakes of the character of masonry; it is microlithic as distinguished from the general megalithic or rude stone construction of the tumulus, and presumably later. The absence of masonry in the construction of the interior of the monument also tells against the age of the wall; but against this we have the fact that dry masonry is found at the back of the chambers of one of the cairns on the Loughcrew Hills, in other respects of rude-stone construction.† Moreover, in estimating the period to which sepulchral monuments of this class are to be ascribed, we must not leave out of account the effects of tradition and conservative feeling. It is not improbable that rude-stone construction was felt to be appropriate to, and employed in the erection of tumuli even after

* *d*, on plan, is a curiously constructed cell, apparently of Christian origin, possibly a hermit's, but concerning which nothing is known.

† Conwell—"Tomb of Ollamh Fodhla," Appendix, cairn "H."

dry masonry was understood. I find it hard to believe that the builders of New Grange, who, as we shall see, were not devoid of structural enterprise, and not without some skill in the working of stone, as shown in the carefully wrought stone basin in the centre of the chamber, were still wholly within the Rude Stone Age. On the whole, taking into consideration the architectural and other features of the tumulus, on which I shall dwell later, which tend to place it towards the close of the series of that class of monuments in Ireland, it is possible, although first impressions are against the wall, that it is part of the original structure.

The entrance, it will be noticed, is clearly marked by the curving inwards of the curb-stones (see Plan). The same feature is strongly marked in the larger cairns on the Loughcrew Hills. We usually think of the entrance of a tumulus as concealed when the chamber was covered in. It is evident, from the manner in which it is marked by the curving inwards of the curb-stones, that this was not so in the case of passage tombs such as at Loughcrew and New Grange. It is probable that the more prominent tombs were set apart for particular families or persons. The tumuli we are speaking of, it must not be forgotten, are grouped in cemeteries, and imply a more or less settled state of society; they appear to have been respected till the coming of the Danes, who, moreover, seem to have found no difficulty in finding the entrances through which they have generally been plundered. The supposition that the passage at New Grange was originally longer is, therefore, incorrect; as also the sections which show the mound produced to a dotted line ending at a standing stone symmetrically with the back slope.* The large stone in front of the entrance is, in fact, one of the boundary stones, and marks the limit of the mound at that side. This stone, richly carved in spirals and lozenges, has been frequently described. Until recently its lower half was covered by the ground. But, last year, the monument having been lately scheduled under the Protection of Ancient Monuments Act of 1882, the earth was excavated in front, under the direction of Sir Thomas Deane, so as to expose the entire of its carved surface. Sir Thomas Deane's investigation brought to

* See Bouie's section in "Archæologia," vol. II., p. 253. Fergusson's "Rude Stone Monuments," p. 203.

light two additional richly-carved stones in the boundary circuit, and it is probable that further examination will add to the number. The two stones

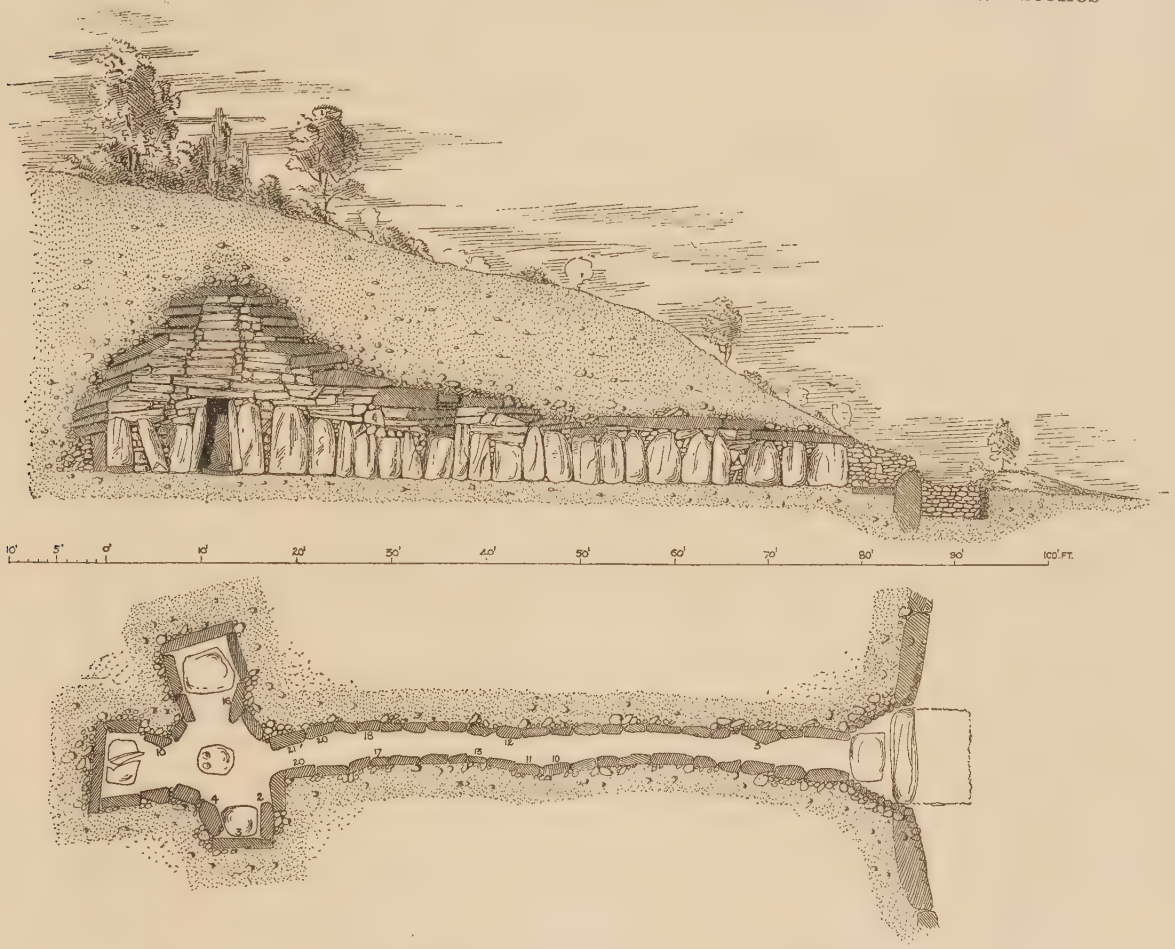

Fig. 3.—Plan and Section of Chamber at New Grange.

referred to are marked *a* and *b* on Plan (fig. 2), and will be more particularly described later. Pits have been sunk before them so as to expose the carving in a similar manner to the entrance stone. The sides of the mound, where it had ravelled out at the entrance, were, at the same time, trimmed and faced with dry walling. This takes somewhat from the sentiment of the monument, but may have been necessary for its protection.

Having sufficiently described the general appearance of the tumulus, we may enter its sepulchral chamber. Immediately in front of the entrance,

and between it and the carved boundary stone already mentioned, lies a large flat stone, forming a sort of sill to the opening of the passage (see Plan, fig. 3). This stone, probably, sealed the entrance, with the dimensions of which it roughly agrees.* A few feet above the opening, a horizontal slab, carved on its projecting face, should be noticed. It gives somewhat of an architectural character to the entrance, and is remarkable on that account as well as for its carving.

In general plan the passage and chamber is irregularly cruciform. The former measures 62 feet in length, and is formed of large stones, set on end, some 5 to 8 feet in height, roofed with flag stones of great size. That at the entrance is 11 feet long, and the stone next but one somewhat longer. The average width of the passage is about 3 feet, but some 14 feet in the side stones have been forced inwards and meet at the top, rendering it necessary to creep on hands and knees for a distance of about 6 feet. After this point the passage presents no further difficulty. At the entrance it is 4 feet 9 in. high; it then rises gradually to about 6 feet through a distance of 26 feet. The headway is then reduced by the roofing stone at that point, after which it rises rapidly by overlapping stones to 7 feet 10 in. at 43 feet from the entrance, when it suddenly falls again to 4 feet 10 in. The construction will be readily understood by reference to the section. After passing this point the passage rises rapidly by corbelled or overlapping stones till merged in the roof of the chamber. The latter consists of a conical or funnel-shaped dome, formed of large flat stones laid horizontally and corbelled, or projecting inwards, one over the other, till closed by a single stone. In plan it is an irregular hexagon, and shows considerable enterprise in the fitting of the passage-roofing, and recesses. The principal dimensions of the chamber are—height, 19 feet 6 in.; end of passage to back of north recess, 18 feet; back of east to back of west recess, 21 feet. Something of an architectural character is given to the construction of this chamber by the carrying round its walls of the upright course

* In a section of the chamber, drawn by Du Noyer, and published in Wilkinson's "Practical Geology and Ancient Architecture of Ireland," 1845, this stone is shown in an inclined position, as if it had been forced back from the entrance. And in the text, Wilkinson says, "a large flat stone appears, from the peculiarity of its position, to have closed the entrance."

of stone which lines the passage, and in places supports its roof. In the chamber, these stones do not actually support the roof, as at Dowth; the construction of the dome is practically independent of such support, and is incorrectly described by Sir W. Wilde as springing from this course of upright stones. The carvings for which the tumulus is noted are cut chiefly on these stones. The three recesses, which give the plan its cruciform appearance, are of unequal dimensions. That on the east side is 8 ft. 8 in. in depth; the north recess, 7 ft. 6 in.; and the west recess but 3 ft. 4 in. On the floor of each recess is placed a large stone basin or rude sarcophagus. The hollowed out form of the basin is most marked in that in the east recess; that in the north recess is, unfortunately, broken—it shows but slight traces of having been hollowed, and might be described as a flat stone; it, however, no doubt served a similar purpose to those in the other recesses. A much more carefully wrought basin at present stands in the centre of the chamber. It was found in the east recess, and stood within the basin still in that recess. It has been recently moved into the centre, on the supposition that, as at Dowth, it originally occupied that position; but there seems to be no foundation for Wilkinson's statement that it originally stood in the centre, and, as I shall presently show, the evidence as to position establishes the contrary. This basin is remarkable for two cup depressions within the hollowed portion of the stone.

Previous Notices.—The reader is now sufficiently acquainted with the general features of the tumulus to follow with interest some of the previous notices of the monument, from which we may recover additional particulars. The earliest description of New Grange is contained in a letter of the Welsh antiquary, Edward Lhwyd, keeper of the Ashmolean Museum at Oxford. It is addressed to Dr. Tancred Robinson of the Royal Society, and dated "Rathgate, near Linlithgow, Scotland, December 15, 1699.* Doubt is expressed by Sir W. Wilde as to when the entrance was first discovered in modern times; the present letter sets that question at rest. I extract the passage in full:—

"We continued not above three Days at Dublin, when we steer'd our

* "Transactions of the Royal Society," vol. xxvii., p. 503. Abridged Series, vol. v., p. 694.

Course towards the *Giant's Causway.* The most remarkable Curiosity we saw by the way was a stately Mount at a place called *New Grange* near *Drogheda;* having a number of huge Stones pitch'd on end round about it, and a single one on the Top. The Gentleman of the Village (one Mr. *Charles Campbel*) observing that under the green Turf this Mount was wholly composed of Stones, and having occasion for some, employ'd his Servants to carry off a considerable Parcel of them; till they came at last to a broad flat Stone, rudely Carved, and placed edgewise at the Bottom of the Mount. This they discover'd to be the Door of a Cave, which had a long Entry leading into it. At the first entering we were forced to creep; but still as we went on the Pillars on each side of us were higher and higher; and coming into the Cave we found it about 20 Foot high. In this Cave, on each hand of us, was a Cell or Apartment, and another went on straight forward opposite to the Entry. In those on each hand was a very broad shallow Bason of stone, situated at the Edge. The Bason in the Right-Hand Apartment stood in another; that on the Left hand was single; and in the Apartment straight forward there was none at all. We observed that Water dropped into the right-hand Bason, tho' it had rained but little in many Days; and suspected that the lower Bason was intended to preserve the superfluous Liquor of the upper (whether this Water were Sacred, or whether it was for Blood in Sacrifice), that none might come to the Ground. The great Pillars round this Cave, supporting the Mount, were not at all hewn or wrought; but were such rude Stones as those of *Abury* in *Wiltshire*, and rather more rude than those of *Stonehenge.* But those about the Basons, and some elsewhere, had such Barbarous Sculpture (*viz.* Spiral like a Snake, but without distinction of Head and Tail), as the fore-mentioned Stone at the entry of the Cave. There was no Flagging nor Floor to this Entry nor Cave; but any sort of loose Stones everywhere under Feet. They found several Bones in the Cave, and part of a Stag's (or else Elk's) Head, and some other things which I omit, because the Labourers differ'd in their Account of them. A Gold Coin of the Emperor *Valentinian*, being found near the Top of this Mount might bespeak it *Roman;* but that the rude Carving at the Entry and in the Cave seems to denote it a Barbarous Monument. So, the Coin proving it ancienter than any Invasion of the *Ostmans* or *Danes;*

and the Carving and rude Sculpture, Barbarous; it should follow, that it was some Place of Sacrifice or Burial of the ancient *Irish*."

In a letter written some three months later, addressed to Rowlands, and published in the latter's "Mona Antiqua Restaurata,"* dated Sligo, March 12, $1\frac{6}{7}\frac{9}{0}\frac{9}{0}$ (New Style 1700), Lhwyd, who appears to have returned to Ireland in the meantime, repeats the description in nearly the same words. The particulars given are not, however, quite so full as in the former letter; it is, therefore, unnecessary to quote it at length. The stone on the top of the mound is mentioned in these words:—The "Mound or Barrow" is "of very considerable height, encompass'd with vast Stones pitch'd on End round the bottom of it; and having another lesser standing on the top." The state of the floor of the chamber is thus described:—"Under feet there were nothing but loose Stones of every size in Confusion; and amongst them a great many Bones of Beasts and some Pieces of Deers' Horns." These passages are worth quoting as tending to make more definite the statements as to the stone on top and state of the chamber of the previous letter.†

The next account of New Grange is found in Molyneux's "Discourse concerning Danish Mounds, Forts, and Towers in Ireland," published in 1725. It is accompanied by a plan of the chamber. Molyneux had visited the tumulus, and speaks from his own observation; his estimate of the height of the mound is, however, strangely astray. He states it is a thousand feet in circumference at the bottom; the flat surface at the top 300 feet; and that it rises in the perpendicular about 150 feet. It is not necessary to quote Molyneux's general description of the entrance and chamber, but some of his statements deserve attention:—"The bottom

* Dublin, 1723, p. 336.

† Sir W. Wilde does not appear to have looked up Lhwyd's first letter in the Transactions of the Royal Society, and so fell into the error of describing the extract from that letter, published in "A Collection of such Papers as were communicated to the Royal Society referring to some Curiosities in Ireland," Dublin, 1726; also in the Abridged Series of the Philosophical Transactions, vol. v. (in both cases without date), as a paraphrase of "Mr. Lhwyd's Essay," published in the "Mona Antiqua." It is really three months earlier; moreover, the second letter omits all mention of the discovery of the entrance by Mr. Campbell, also the important statement concerning things said to be found in the cave, but as to which the labourers differed, which fixes the date of the discovery of the entrance as shortly before Lhwyd's visit.

of the cave and entry," he states, "is a rude sort of pavement, made of the same stones of which the mount is composed, not beaten or joined together, but loosely cast on the ground only to cover it. Along the middle of the cave, a slender quarry-stone, five or six foot long, lies on the floor, shaped like a pyramid, that once, as I imagine, stood upright, perhaps a central stone to those placed round the outside of the mount; but now 'tis fallen down. . . . . When first the cave was opened, the bones of two dead bodies entire, not burnt, were found upon the floor, in likelihood the reliques of a husband and his wife, whose conjugal affection had joyn'd them in their grave. . . . .

"In each of the three cells was placed upon the ground, a broad and shallow cistern, somewhat round, but rudely formed out of a kind of free-stone; they all were rounded a little at the bottom so as to be convex, and at the top were slightly hollowed, but their cavities contained but little; some of their brims or edges were sinuated or scolopt; the diameter of these cisterns was more than two foot wide, and in their height they measured about eighteen inches from the floor.

"The cell that lay upon the right hand was larger; . . . the cistern it contained was better shaped, and in the middle of it was placed another smaller cistern, better wrought, and of a more curious make."

Molyneux also informs us that "about ten or twelve years since" two Roman gold coins, one of Valentinian, and the other of Theodosius, were found in removing some stones on the outside of the mound. The plan which accompanies Molyneux's account, which, he tells us, "Mr. Samuel Molyneux, a young gentleman of the College of Dublin, delineated with care and accuracy, upon the place, last summer," appears to be drawn with some care. The general proportions of the chamber and passage are correctly shown, and the stones have been counted, though no dimensions are given. The basins in the three recesses are shown, and the stone alleged to have been seen lying in the centre of the chamber is shown on the plan in that position. A rude drawing of the eastern recess is also given, as well as drawings of the two Roman coins stated to be taken from the coins themselves.

In 1770, Governor Pownall, who had lately visited the locality, read a

Paper before the Society of Antiquaries on the "Sepulchral Monument at New Grange." * The Paper is of considerable length, and is illustrated by a sketch of the mound. No trees appear to have obscured its outline at that time, which is shown as that of a truncated cone, with flat top, rising above the trees of the surrounding fields. Pownall describes its appearance thus:—"The lanes about it are planted with rows of trees. And the country forms an ornamental landscape, uncommon in Ireland. The pyramid, if I may so call it, built on rising ground, and heaving its bulky mass over the tops of the trees and above the face of the country, with dimensions of a scale greater than the objects which surround it, appears, though now but a ruinous frustrum of what it once was, a superb and eminently magnificent monument." Pownall employed a Mr. Samuel Bouie, a local surveyor, to measure the mound and chamber, and the Paper is illustrated by plans and sections prepared from Bouie's measurements.

Bouie makes the height of the tumulus 42 feet. Pownall is inclined to estimate it at 56 feet from the horizontal line of the floor of the cave; and, adding the curve of the ground, he makes the altitude of the whole to be about 70 feet. The other dimensions agree nearly with Molyneux. Bouie's estimate of the height, it will be noticed, agrees nearly with the present section.

Pownall's description has been the chief source from which subsequent writers, including Petrie, Wilde, and Fergusson, in his "Rude Stone Monuments," have taken the dimensions and other particulars of New Grange. The sections and plans, though giving some general idea of the chamber, cannot be relied on in detail, and as regards the mound, as Fergusson says, "it is almost impossible to make out its form and dimensions from the plates published." Pownall found no trace of the stone which Lhwyd says stood on the top of the mound. "The pyramid," he adds, "in its present state" is "but a ruin of what it was. It has long served as a stone-quarry to the country round about. All the roads in the neighbourhood are paved with its stones; immense quantities have been taken away." The following particulars are of interest:—The "Northern Tabernacle" of the chamber is described as having for its floor a large flat stone; the two side niches

* "Archæologia," vol. II.

had no other floor but the natural ground, but had each of them a rock basin placed within them—that on the left side on the ground, and that on the right "upon a kind of base." The greater part of Pownall's Paper is taken up with historical conjectures and a lengthy investigation, into which we need not follow him, of certain marks which he took to be traces of letters, and finally persuaded himself to be Phœnician numerals.*

The foregoing notices of New Grange do not carry us far, but are definite in some particulars. It is certain that the well-wrought basin, now in the centre of the chamber, was in the east recess, within the basin still there, when the chamber was first entered. I see no sufficient reason for removing it to the centre, and would suggest that it should be restored to its former position. The east recess is the largest and most richly inscribed, and it is more probable that the basin referred to, originally stood within the second basin in that recess, as found, than that it was placed there subsequently. In any case we have little more than conjecture to sustain its present position.

It is difficult to doubt the positive statement of Lhwyd that a pillar-stone stood on the top of the mound when seen by him. But no trace of this stone existed in 1770, nor has any been found since. The floor of the chamber has been recently cleared of the loose stones mentioned by Lhwyd, a number of which have been placed at the bottom of the pit dug in front of the carved stone at the entrance. They appear to be carefully chosen water-rounded stones, and are of interest as a portion of the original pavement of the chamber, a well-known feature in such structures.

No trace remains of the slender quarry-stone mentioned by Molyneux as lying along the middle of the cave. Molyneux's account is not very reliable, and I am inclined to think no such stone existed: Lhwyd does not mention

* Pownall's plans and sections are reproduced by Ledwich in his "Antiquities of Ireland," published in 1803. New Grange is also described in Sir R. C. Hoare's "Tour in Ireland," 1806. He appears to have been the first to have noticed the two cup depressions within the basin in the east recess. Petrie wrote a short account of the monument in the "Dublin Penny Journal," 1833. The most complete, however, of the descriptions previous to the present will be found in Sir W. Wilde's "Beauties of the Boyne and Blackwater," 1847, second edition, 1850; the illustrations, with one exception, are from drawings by Mr. W. F. Wakeman.

it, and it is not likely to have been removed. It is possible that the stone which has fallen forward at the right-hand side of the north recess, and which is not unlike that shown on the plan given by Molyneux, may have been confused in his mind as to position. The bones of two dead bodies said to have been found upon the floor are sufficiently accounted for in the "bones of beasts" mentioned by Lhwyd, which in the imagination of the peasantry may have assumed the definite form of "two dead bodies entire." It is not probable that, if any definite information were given as to the finding of human remains, so careful an observer as Lhwyd would have omitted all reference to the matter.

So far, then, do the descriptions of previous writers help us in the restoration of this interesting monument. I fear we must wait for the exploration of some less despoiled tumulus to throw more certain light on the subject.

Mode of Interment—Construction, &c.—Many guesses have been hazarded as to the exact use of the stone basins which occupy the recesses. There can hardly be any doubt but that they served the purpose of some rude form of sarcophagus, or of a receptacle for urns. In the construction of such chambers it is usual to find a sort of sill or low stone placed across the entrance into the main chamber, and at the openings into the smaller chambers or recesses; such stones also occur laid at intervals across the bottom of the passages. This forms a marked feature in the construction at Dowth, and in the cairns on the Loughcrew Hills, but is wholly absent at New Grange. It appears to be further the case that, as a rule, though not invariably so, where stone slabs or basins of large size are found in the sub-chambers, no sill-stone is placed across the entrance. The basins would seem to indicate a development, and to replace the sill-stone as a means of confining the interments. New Grange may mark the full development of the type; its architectural features place it towards the end of the series, and the complete absence of sill-stones within the chamber contrasts pointedly with Dowth.

The use of these basins is probably connected in origin with the mode of burial by inhumation or incineration. They are large enough to hold

the body in a contracted position, in which manner, the knees drawn up to the chin, it was not unusually placed. But whereas, in such cases, an earthen or paved floor would be sufficient, and a projecting sill-stone necessary to close the chamber in which the body was placed, and to confine its members, the stone slab or basin would appear to be a natural adaptation to urn burial, especially if the urn was inverted on the collected ashes. We have no direct evidence as to the mode of burial in the great tumulus at New Grange; but the evidence of other tumuli of apparently the same period and people points to incineration. Wilde mentions that he was present at the opening of a small "kistvaen," on the western side of the natural slope of the hill of New Grange a few years before he wrote his account of the tumulus: "It was about eight feet long, and consisted of a small stone passage leading into a little chamber, formed on the type of the great barrow in that vicinity. In this was discovered a vast collection of the remains of domestic animals, as well as several human bones, some perfect and others in a half-burned state. What gave particular interest to this excavation was the fact of the stones which lined the floor having been vitrified on the external face, which would lead to the conclusion that the cremation had taken place in the grave."* He also states that, when the tumulus of Dowth was opened by the Royal Irish Academy, in 1847, "within the chamber, mixed with the clay and dust which had accumulated, were found a quantity of bones, consisting of heaps as well as scattered fragments of burned bones, many of which proved to be human." But the evidence of Dowth, as we shall see, owing to a secondary occupation of the chamber, is not reliable. The association of the stone basins referred to with urn burial is, however, strongly supported by Mr. Conwell's investigation of the Loughcrew cairns, which have indeed furnished the most positive evidence on the subject yet brought to light. In the chambers of several of the cairns large quantities of charred human bones, portions of urns, &c., were found. In one cairn, the chamber contained seven compartments formed of flagstones set on edge. On the floors of five of the latter were placed square flagstones, about 2 feet square by 2 inches thick. On four of

* "Proceedings R. I. A.," vol. III., p. 262; "Boyne and Blackwater," p. 203.

these were found charred bones.* In another cairn, also containing seven sub-chambers or compartments, stone basins were found on the floors of two of the compartments. The smaller of these measures 2 feet 11 in. by 2 feet, and is hollowed to a depth of about 3 inches: it is confined by a sill-stone. "Mixed with the earth under this sepulchral basin," Mr. Conwell says, "were found many fragments of charred bones and several human teeth."

The other basin is of unusual size, measuring 5 feet 9 inches by 3 feet 8 inches. The surface of the stone is flat, but surrounded by a raised rim of about an inch in depth, and from two to four inches in breadth; it is not protected by a sill-stone. Mr. Conwell adds that, on raising this stone, pieces of charcoal and upwards of 900 pieces of charred bones were obtained from the earth underneath it; also forty-eight human teeth, two fragments of bone pins, a perfectly rounded syenite ball, two other stone balls, a polished jet-like object, and eight carbonate of lime "brain balls," 154 fragments of rude pottery, and over 1000 portions of bones were collected among the loose stones which filled the chamber of this cairn.†

One other piece of positive, though not conclusive evidence, connecting these basins with urn-burial may be mentioned. The carefully-worked basin which stood inside the larger one in the east recess at New Grange is remarkable for the two cup depressions within its hollowed surface. A slightly-marked ridge or step is noticeable as dividing the two cups from the central hollow. The two clearly-marked cups, 8 and 7 inches in diameter, have given rise to much speculation.

In 1872 Mr. Wakeman superintended the examination of an urn cemetery at Drumnakilly, Co. Tyrone. In some cases the urns were enclosed in cists; in others not. In four instances the stones forming the floor of the cists exhibited well-marked cup-hollows. In two cases highly decorated cinerary urns were found *in situ*, mouth downward over the cups. In one case the stone contained two cups over which the urn was inverted; in the other a single cup. This "find," Mr. Wakeman adds, "suggests

* Conwell—Cairn "I." † Cairn "L."

the idea that the basins already referred to as occurring in some of our greater cairn chambers may have been formerly surmounted by sepulchral vases of which no trace remains."*

The body of evidence here presented undoubtedly points to incineration as the probable mode of burial in the tumulus of New Grange, or as accompanying the interment or interments. But the question cannot be regarded as settled. The coexistence of a practice of burial of the body unburned, and after cremation, has been well established in districts of England and in other countries. The occurrence of unburnt and burned bodies in the same grave, and under circumstances which place beyond doubt the contemporary nature of the interments has also been noticed.† The subject has not yet been scientifically approached in Ireland, but evidence of a similar character may be found incidentally noticed in our archæological Journals.‡ Should Knowth prove to be chambered, the opening of this, the third largest of the tumuli in the New Grange group, will probably throw additional light on the subject, but till then we can hardly venture beyond the range of probabilities.

The possibility of other chambers being contained within the great mound of New Grange has been much discussed. The discovery of a second chamber at Dowth would seem to point in that direction. Dowth, I regard, however, as exceptional in that respect, and incline to the opinion that the tumulus at New Grange contains but a single chamber. The fact that the passage and chamber reaches but little over one-third within the diameter of the mound is not an exceptional feature, but the usual type of such structures. In the principal cairn on the Loughcrew Hills, the passage and chamber does not extend to even one-third of the diameter. The entrance is clearly marked in the larger of the Loughcrew cairns by the curving

* "Proceedings R. I. A.," 1889, 3rd Series, vol. I., p. 259. For details of find see "Journal of the Royal Historical and Archæological Association," 4th Series, vol. II., p. 499. 1872–1873.

† Greenwell's "British Barrows."

‡ See an account of the opening of a large tumulus (chamber, 6 by 8 feet, near Portaferry, Co. Down, containing bones of a full-grown person and of a child, unburnt, together with several fragments of incinerated human bones. "Proceedings R. I. A.," vol. III., p. 262, *note*.

inwards of the boundary stones. The entrance at New Grange is similarly marked, and no indication of other chambers is shown on the boundary stones.

Sir Thomas Deane's happy speculation that the spirals on the stone at the back of the west recess were intended as a plan of the mound led to the discovery of two additional carved stones in the boundary circuit, but this I regard as merely a fortunate coincidence, and no trace of passages has been found behind them. The fact that the chambers generally do not reach inwards more than about one-third the diameter of these large tumuli, is, perhaps, accounted for in their construction. To raise the roofing-stones into position a sloping embankment of earth was probably necessary. The chamber and passage would, in fact, be erected at one end of an embankment, and the roofing-stones brought into place from the back and sides. They would not be dragged over the passage, and at the back and sides the slope would be more extended and offer an easier gradient. In completing the mound, it would naturally be raised on the dimensions of the embankment already used for the purpose of bringing the stones into position, and the chamber would consequently lie towards the circumference. Or the question may be looked at from another point of view. To preserve access to a chamber placed in the centre of a mound of the dimensions of New Grange would necessitate a passage of some 130 feet in length. Now, as the height of the mound depends on the diameter of the base, unless the passage be thus unduly prolonged, height must be obtained by an extension of the base at the back of the chamber. The chamber and passage having been constructed, the desire to mark the importance of the monument by the height of the mound will, therefore, naturally lead to an extension of the base to the back, and consequent displacing of the chamber from the centre of the mound.

One other feature of interest in reference to the construction of the tumulus may be mentioned. Wilde states that the stones of which the tumulus is constructed in some cases belong to a class of rock not found in the neighbourhood; some, he adds, are basaltic, and others must have been transported from the Mourne Mountains.

Mr. R. Clark, of the Geological Survey, who accompanied me on the

occasion of one visit to New Grange, has kindly furnished the following short report on this point:—

"Both these remarkable structures, Dowth and New Grange, are erected on the drift which in this neighbourhood thickly covers the coal measures formation. The passages and chambers of the two mounds have been formed of large slabs of the Lower Silurian rocks, which crop up within a few miles distance. They were apparently either rudely quarried for the purpose, or split from surface rocks. With the exception of some of the stones in the passage and others of the upright course, the slabs in the interior of New Grange show little traces of the original weathered surface of the rocks from which they were taken, but on the contrary even faces, which indicate that they have been split along the cleavage, and care taken in their selection. The spiral carvings have been cut exclusively on this description of stone; and, considering the exposed positions of the external slabs, they show but little effect of weathering. Each mound is surrounded by a circle of elongated blocks and slabs placed on edge. These also are mostly derived from the Silurian rocks, interspersed with a few varieties of traps. The parent rocks of the latter are probably to be found amongst the igneous rocks which are associated with the Silurian beds in the vicinity of the neighbouring town of Slane. In the outer circle at New Grange are a number of standing stones, mainly of Silurians (grits and slates); a few traps also occur which may also be referred to the Slane district. The large standing stone near the River Boyne, at New Grange, is composed of a fine compact grit. In the centre of the chamber of the New Grange structure is a granite basin, which Wilkinson in his "Ancient Architecture of Ireland" states to be of Mourne origin. It is difficult, owing to the defective light to be obtained, to definitely fix the locality from which the material for this basin was procured. To the writer it appeared to bear more resemblance to some of the granites of the Wicklow series than to those of the Mourne district.

"There is no doubt that with the exception of the granite basin above referred to all the materials used were procurable within a radius of a few miles. Wilkinson points out in his work that flags of very considerable size can be obtained in a quarry at the old gateway of Mellifont Abbey: it

is not improbable that this was the source from whence the huge slabs at Dowth and New Grange were obtained."

Wilde's statement appears, therefore, to be too general. Basalt is found at Slane, within a distance of three or four miles, and the granite basin is the only stone the presence of which is difficult to account for. The fact that the stones are local reduces little our estimate of the labour expended on the construction of New Grange. To convey stones of such great size even a few miles must have proved a task of no ordinary difficulty, and involved possibly many years of continuous labour. Whether the granite be referred to the Mourne or to the Wicklow district, if it has not been conveyed to its present locality by natural agencies, would imply carriage of over fifty miles. The dimensions of the basin, about 4 feet by 3 feet 6 in., by 1 foot thick, are, however, more manageable than most of the blocks of the structure, and reduce the difficulties of transport.

Inscribed Stones.—The remarkable carvings on the stones of the passage and chamber at New Grange have afforded a wide field for conjecture. Pownall saw in one of the markings Phœnician character. Colonel Vallancey constructed an alphabet from them, and read the name Angus. The veteran archæologist, Sir R. C. Hoare, rejected such fancies. He observes: "Some antiquarians have carried their zeal so far as to discover (in idea) letters on the stones, which they have attributed to the Phœnicians; whilst others have denominated them *Ogham* characters: those marks which I have observed on many of the stones bore very little resemblance to letters, and a great similarity to the ornaments I have found on the ancient British urns discovered under our tumuli in Wiltshire."*

The valuable suggestion here thrown out fell unnoticed. Sir W. Wilde followed in the old furrow. "The question may well be asked," he says, "what was their purpose; are they mere ornamental carvings, or are they inscriptions from which the history of this monument, or whatever it was originally intended for, might be learned? Are they ideographical, or hierographic, in the strict sense of that word, that is, sacred carvings? To this latter we are inclined; and if we may be allowed to coin a word to

* "Tour in Ireland," p. 256.

express our meaning, we would call them Tymboglyphics, or *tomb-writings*, for similar characters have as yet only been found connected with the vestiges of ancient sepulchres, as here at Dowth, and on tombs of a like character in the counties of Down and Donegal."* The latter statement, we shall see, is not quite accurate.

I have held the opinion for some time that the conditions of the inscribings at New Grange are fully satisfied by those of ornament. That, in fact, these markings simply represent the style of decoration of the period, and that their explanation is to be sought in that direction. It is possible that some of the figures were in their origin symbolical; but we must distinguish between essential meaning and constructive meaning—between meaning inseparable from the figure, and meaning to be determined by particular use. The spiral may be used symbolically, but it is not necessary to see in every spiral—a figure constantly suggested, naturally reached in the working of metals, and easily adapted to the finishing of pliable ends, most fascinating to draw, and readily satisfying artistic needs—symbolical meaning. I hope to show, in the succeeding pages, that in treatment and position the carvings in New Grange are used solely with a decorative end, and, though the delight of mystery may be thus removed, to establish the added importance of this great monument as marking the beginning of decorative art and architecture in Ireland.

I am not here concerned with the general question of cup and ring markings with which the inscribed stones at New Grange are usually associated. I believe, in the tumuli of the Boyne and Loughcrew, we hold a loose end of that tangled skein. But until some sure footing has been secured by the exhaustive treatment of particular examples, further guesses would but add to the mass of conjecture which already chokes the way.

The New Grange inscribings are commonly classed with those at Dowth and Loughcrew. But important distinctions must be made. Thus, whereas many of the stones at New Grange are cup-marked, not a single example is found of cup and ring marks, as at Loughcrew, or of concentric circles found at the latter and at Dowth. Where the circle with concentric curves occurs, it is used in combination to form a new figure (see Pl. IV.); it is

* "Boyne and Blackwater," p. 200.

never used in isolation simply as concentric circles, as at Dowth and Loughcrew. The nearest approach to circles in isolation is found on Stone No. 20 at right side of passage (fig. 4). The cutting in this instance is but slightly marked. The oval hollow, in which some of the circles lie, bears some resemblance to the markings on the outer stone at *a* on Plan (fig. 2). In reference to the use of the circle in the more simple forms of incised markings we must bear in mind that the people who carved these figures were in some aspects a round-ideaed people. Their huts were round, their forts, their tombs, their shields were round. Among a people in whose architecture the circle was so ruling a feature we should expect to find circular forms prominent in their decoration. It is, moreover, one of the easiest figures to lay out and easiest to draw, and is the only figure whose relations are equal in all directions, in which the interest lies so completely within itself, and is independent of surroundings. This latter property must have rendered the circle (or concentric circles) peculiarly acceptable in primitive decoration. A single set of concentric circles was, in itself, artistically satisfying, and a symmetrical arrangement of circles readily adapted to the enrichment of objects. Concentric circles are, indeed, probably the most widely-spread form of decoration, and even now are constantly used with pleasing effect.

Fig. 4.—Stone No. 20, right side of passage.

The accompanying illustration of a gold fibula, in the possession of

Fig. 5.

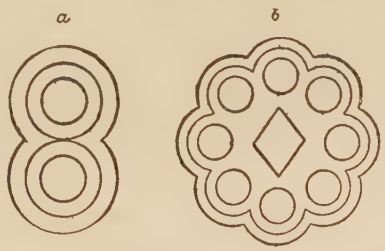

Fig. 6.

Trinity College, shows a good example of the application of concentric circles to decoration. The circles are indented, and surround a central

indented spot, and, it will be noticed, are associated with chevron and dog-tooth ornament.*

The approximation of two groups of concentric circles readily gives us *a* (fig. 6), and the transition is easy to *b*. Both these figures are found on the roof-stone of the east recess (Pl. IV.). The latter appears to me to indicate a sense of relation—a groping towards symmetry—which may be taken as the first promptings to geometrical design. The design on a bone comb, from a cemetery of the early Iron Age at Nordrup, in Seeland (fig. 7), presents an interesting parallel in treatment.† It was found in a grave (male) with, among other objects, a denarius of Antoninus Pius. The cemetery is, approximately, dated about the year 300 A.D.

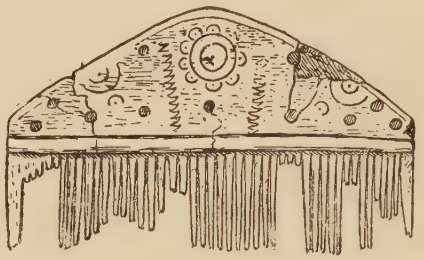

Fig. 7.

As stated, concentric circles are not found at New Grange; their place is taken by the spiral. At first glance some of the inscribings, such as at the back of the west recess, look like circles, but in all cases they will be found to be spirals on closer examination. The treatment of concentric curves referred to, and exclusive use of the spiral, appears, in fact, whether the choice of an individual artist or the result of a general tendency, to mark an expansion in decorative enterprise, a breaking loose from the conventions of a more primitive stage. This development of artistic sense is more strikingly shown in the beautiful group of three

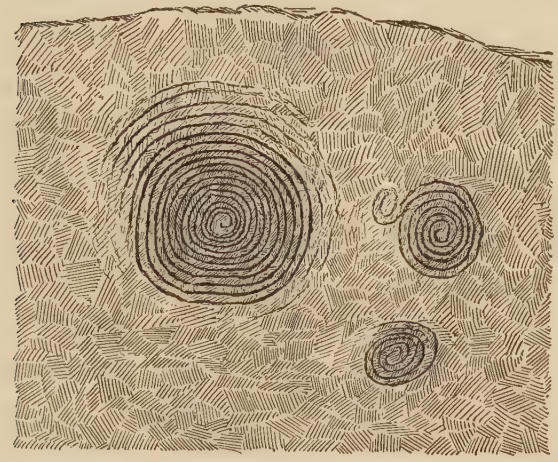

Fig. 8.—Stone 3, back of west recess.

* See "Wilde's Catalogue, Museum, R. I. A.," from which the cut is taken.

† From "Nordiske Fortidsminder," Copenhagen, 1890.

double or looped spirals cut on the right-hand stone at the entrance of the north recess (Pl. V., fig. 2). The seeker of symbols will find here the representation of a triad, and speak of the group as a *triskeles*. It might be urged that the grouping of spirals in three is the most artistically satisfying adaptation of that figure, the flow of line being perfect along each of the three paths. All other combinations of spirals are more readily adapted to running or all-over patterns. But we need not urge these considerations; the figure under discussion is not founded on a triad relation. If we follow out its lines, we find that it consists of two double spirals joined S-wise, with a third double spiral added at the left-hand side, the loose ends of which are carried round the other two, but are structurally independent of them. The treatment is in fact identical with that of the spirals on the large stone before the entrance (Pl. I.), and is applicable to any number of spirals, it being only necessary to carry the loose ends of each added spiral in concentric curves round those already completed to obtain a pleasing all-over effect. When applied to large surfaces the method breaks down; from the increasing number of spirals the ends of each added one have to be carried round. This was no doubt felt to be a difficulty which was probably solved by the discovery of the system of interlocking spirals in threes and fours for all-over treatment. The treatment at New Grange is, however, very interesting, and I believe peculiar to that monument, and a few objects apparently the production of the same period and race. In all other instances of all-over treatment of spirals with which I am acquainted, the spirals are organically related and interlocked on a system of three or four.

The method adopted at New Grange would seem to indicate that the artist was as yet unable to grapple with the complexity of interlocking spirals for running and all-over treatment, and was feeling his way along the path of concentric curves, suggested perhaps in the first instance by the approximation of concentric circles, towards the final expression of the form. The annexed figure (fig. 9)* of a stone ball, one of a class which appears to be almost exclusively confined to Scotland,† may be compared with

* From a block kindly lent by the Society of Antiquaries of Scotland.

† One has been found in Ireland, at Ballymena.—"Archæological Journal," vol. xi., p. 58.

the carvings at New Grange. It was found at Towie, Aberdeenshire,* and is the most highly-decorated example of these balls known. It will be noticed that the treatment of spirals is identical with that of the entrance stone at New Grange, and that the ornament also presents analogies to some of the figures on the roofing stone of the east recess. Sir J. Evans is of opinion that these balls were probably intended for use in the chase or war, and were attached to a thong, "which the recesses between the circles seem well adapted to receive." He conjectures that they were used as *bolas*. One of the four rounded projections of the Towie ball is smooth and undecorated; the other three, as shown in fig. 9, are highly decorated. Sir J. Evans adds that, assuming "it would be necessary to fasten it by means of a thong, some channelling of the surface would become a necessity; and the natural tendency of savages to decorate their weapons might lead to regular circular discs being left between the channels on the ball, and even to their being engraved in patterns, the disc next the cord being left undecorated." He further adds that, "even if the use of the *bolas* or single *bola* were unknown, there is a form of military flail or 'morning-star,' a sort of modification of the staff-sling, though the stone never quits the cord by which it is attached to the staff, for which such balls as these might serve."†

Fig. 9.

In the illustrations and descriptions hitherto published of the carvings at New Grange, the spiral has received undue attention. The chevron, lozenge, and dog-tooth occupy quite as prominent a position in the carvings

* "Proceedings of the Society of Antiquaries of Scotland," vol. III., p. 439. Evans's "Ancient Stone Implements of Great Britain," p. 376.

† Evans's "Ancient Stone Implements of Great Britain," p. 378. Dr. J. A. Smith, who has written at length on the subject, does not agree that they were used as *bolas;* they have always been found singly, and he is of opinion that they were used as war maces.—"Proceedings of the Society of Antiquaries of Scotland," vol. XI. Mr. Anderson gives a general assent to this view.—"Scotland in Pagan Times: Iron Age."

of the tumulus. When we take into consideration the treatment of these forms, and the fact that they may be said to constitute the *style* of decoration of the Bronze Age in Europe generally, the evidence appears to me conclusive that decoration is the sole object of these carvings. The use of the chevron in decoration is so widespread, that it is hardly necessary to insist that it is not essentially symbolic. It may have been used symbolically in particular instances, but its decorative fitness fully satisfies its use on the countless objects, weapons, implements, urns, and ornaments on which it is found. At New Grange it occurs on three stones in the passage: in one case forming a decorative panel in combination with spirals and a lozenge (stone 17, left; Pl. V., fig. 1), in the other two unassociated with other forms (figs. 10 and 36). It is also prominently displayed in the east recess (fig. 11). The annexed cut of a bronze celt (fig. 12) from the collection of the Royal Irish Academy may be compared as to treatment.

Fig. 10.—Stone 18, right side of passage.

Fig. 11.—Back of east recess.

Fig. 12.—(Half size.)

The dog-tooth is one of the most distinctive forms of the class of primitive decoration with which we are dealing: it is found constantly on pottery, bone pins, bronzes of all kinds, and gold ornaments. Well-marked examples occur on the

edge of the stone over the opening of the passage into the chamber (fig. 13), and on the boundary stone *b* on plan (fig. 34).

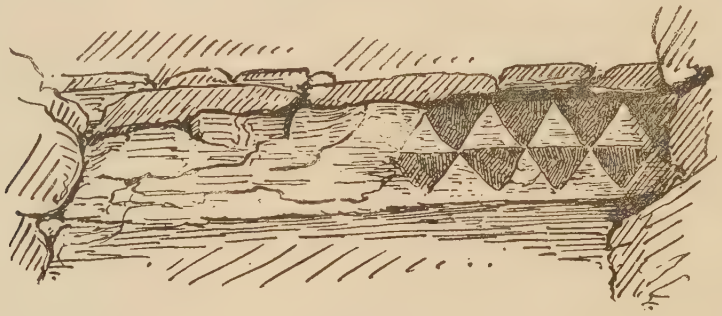

Fig. 13.

The lozenge requires more detailed discussion. It occurs frequently on the objects referred to, but I am inclined to think that a slight preference is shown for dog-tooth in the decoration of the period. If prehistoric ornament be examined it will be noticed that in many cases what appears at first sight to be a design of lozenges is really dog-tooth, a dividing line being shown bisecting the lozenges and forming a base line to the triangles of the teeth. The same feeling for dog-tooth is shown on the Irish gold lunettes, and where two opposing lines of dog-tooth ornament are approached so that their points touch, the intervals being thus marked out in lozenge spaces, the lines in many cases are not cut across from side to side in an X manner, but each triangle or tooth is completed independently. This predominance of the dog-tooth may indicate that the lozenge was a development from the dog-tooth, and account for the fact that the lozenge is so frequently halved or quartered, even when apparently used as a lozenge. I do not, however, lay much stress on the point.

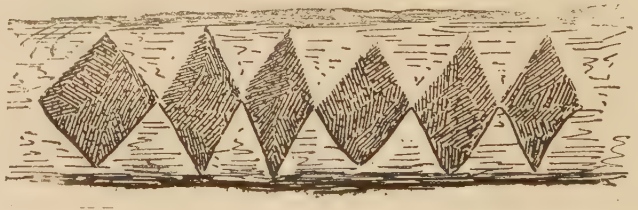

Fig. 14.

Figure 14 shows a series of six plain lozenges cut on the edge of the top stone at the right-hand side within the east recess; the lozenges are cut out to a depth of about half an inch. At the top of the large stone on

the right side of the entrance to this recess will be found the lozenges (fig. 15). In this case the ground has been picked out and the lozenges

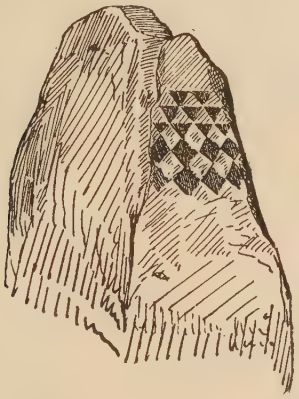

Fig. 15.

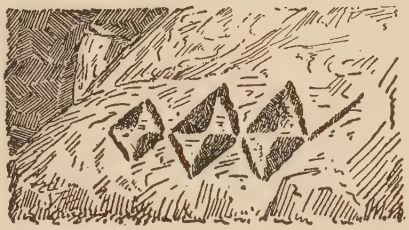

Fig. 16.

left in flat relief. A similar treatment of lozenges occurs above the spiral on the left-hand of the west recess (Pl. V., fig. 3). The lozenge is also found on the stone at the entrance and on boundary stone *b*. The treatment of the lozenge on the entrance stone is a good instance of artistic feeling, the space left by the curves of the spirals being thus harmoniously filled.

Fig. 17.—(l. 14¼″.)

On the passage side of stone No. 21 (fig. 37), a number of lozenges will be noticed which are halved by the cutting out of each alternate half, the remaining half being left in relief. On the opposite side of the passage, on stone No. 13, a row of three lozenges is treated similarly, but in this case the lozenges are quartered (fig. 16). This treatment of lozenges is very characteristic of the ornaments engraved on spear-heads and daggers of the bronze period—a similar effect being produced on the latter by the hatching of halves or quarters of the lozenges. The accompanying cuts of examples in the Academy's collection fully illustrate this feature (figs. 17 and 18)

Fig. 18.

One other pattern remains to be noticed. Along the edge of the remarkable slab above the entrance which suggests the idea of a sort of architrave or lintel stone, an × or gate pattern is carved in relief. The pattern strikes one at first as more advanced than the general ornamentation of the chamber. It is, however, not an unusual feature in the ornamentation of the period. A single × panel is introduced at intervals on the gold lunette (fig. 19). And among a collection of

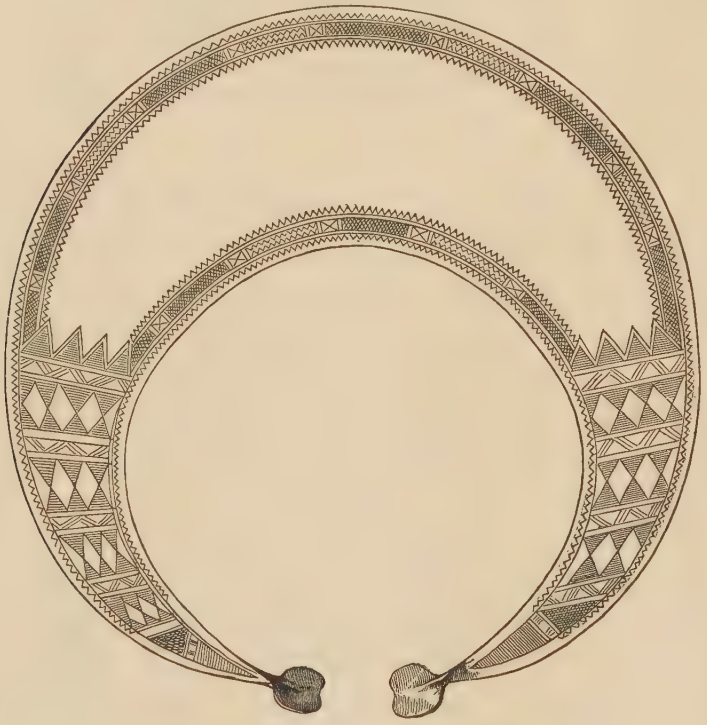

Fig. 19.

Fig. 20.—(l. $10\frac{3}{4}$″.)

drawings in the possession of the Royal Irish Academy is a rubbing of a similar lunette on which occur bands of three such figures end to end as at New Grange. The annexed cut of a bronze dagger in the Academy's collection shows substantially the same pattern (fig. 20).

The evidence I have now placed before the reader of the decorative character of the carvings in the tumulus at New Grange will, I think, be found conclusive. The forms are not peculiar to that monument, or similar structures, but are common to the urns, weapons, utensils,

and ornaments of the bronze period. They constitute, in fact, the *style* of the period. The argument is consistent throughout, and is not based on conjecture. It is further supported by the architectural position of the ornamentation in several instances, and considerations to be advanced in regard to the transition from inscribed design to relief noticeable in many cases.

But before proceeding with that portion of the argument, it will be convenient to notice two exceptional markings which have attracted much attention. Both are on the same stone, No. 4, in west recess, which might therefore be considered exceptional were not traces of a spiral discernible on its principal face. The surface has scaled a good deal, but the spiral may be made out in the general view of the chamber (Pl. II.) near the ground at the left side. The first of the markings referred to is the well-known fern leaf or palm branch, cut on the edge face of the stone (fig. 21). The drawing of the leaf is very naturalistic. The lower part of the branch, however, partakes of the conventional character of the herring-bone, or, as it is sometimes called, tree pattern, thus giving us a link with the herringbone markings at Dowth, and similar orna-

Fig. 21.

Fig. 22.

Fig. 23.—(Half size.)

ment so common on celts and urns (fig. 22). I have also been so fortunate as to discover a bronze celt in the collection of the Royal Irish Academy (fig. 23) the decoration on which forms a near approximation to the form of the fern leaf at New Grange, and thus brings the latter into relation with the general decoration of the chamber.

The other figure referred to is quite exceptional (Pl. V., fig. 4).

Some doubts have been expressed as to the genuineness of this marking. It existed, however, prior to 1770, when it was figured in the "Archæologia," and the discovery of a similar figure on one of the stones of a tumulus at Locmariaker, in Brittany, conclusively establishes its authenticity. Governor Pownall concluded that the characters were Phœnician, but only numerals. Mr. Fergusson is of opinion that it can hardly be a mere ornament, but must be either a mason's mark or recognizable symbol of some sort, something to mark the position of the stone or its ownership by some person. Similar marks, he adds, are found in France, but seem equally devoid of any recognizable meaning. He compares it with that referred to at Locmariaker, which it closely resembles.

I venture to submit the following evidence that the marking at New Grange, as also that at Locmariaker, is a rude representation of a ship or galley similar to those of the Scandinavian rock tracings.

I have first to remark that Mr. Fergusson's cut of the New Grange mark, which appears to have been copied from that in Sir W. Wilde's "Boyne and Blackwater," is not quite correct.

In the figure, as shown in the photograph, with which the engraving in the "Archæologia" agrees, there is no second transverse line closing the three lines within the first portion of the figure, as shown in Mr. Fergusson's cut; on the contrary, the third and fourth lines, counting from the left-hand side, are free at the bottom. The resemblance to the mark on the Locmariaker stone is enforced by the circle which forms a portion of both groups as shown in Mr. Fergusson's cuts. On turning, however, to the drawing of the Locmariaker stone given by the late Sir Samuel Ferguson in the Proceedings of the Academy in 1863* (fig. 24), from which Mr. Fergusson appears to have taken his cut, it will be noticed that the circle in Sir Samuel's drawing is but lightly marked, and does not bear the same relation in character to the group that Mr. Fergusson's cut suggests. In the drawing of the figures on this stone, given by M. René Galles, in the "Revue Archéologique," vol. x., the circle is also lightly indicated. And in the illustration published in the "Dictionnaire Archéologique de la Gaule," the

* Proceedings R. I. A., vol. VIII., p. 400.

circle is replaced by a filled-in mark of no very definite shape. The latter illustration does not appear to be as carefully drawn as the former; but I gather from a comparison of the drawings of this figure that the circle is

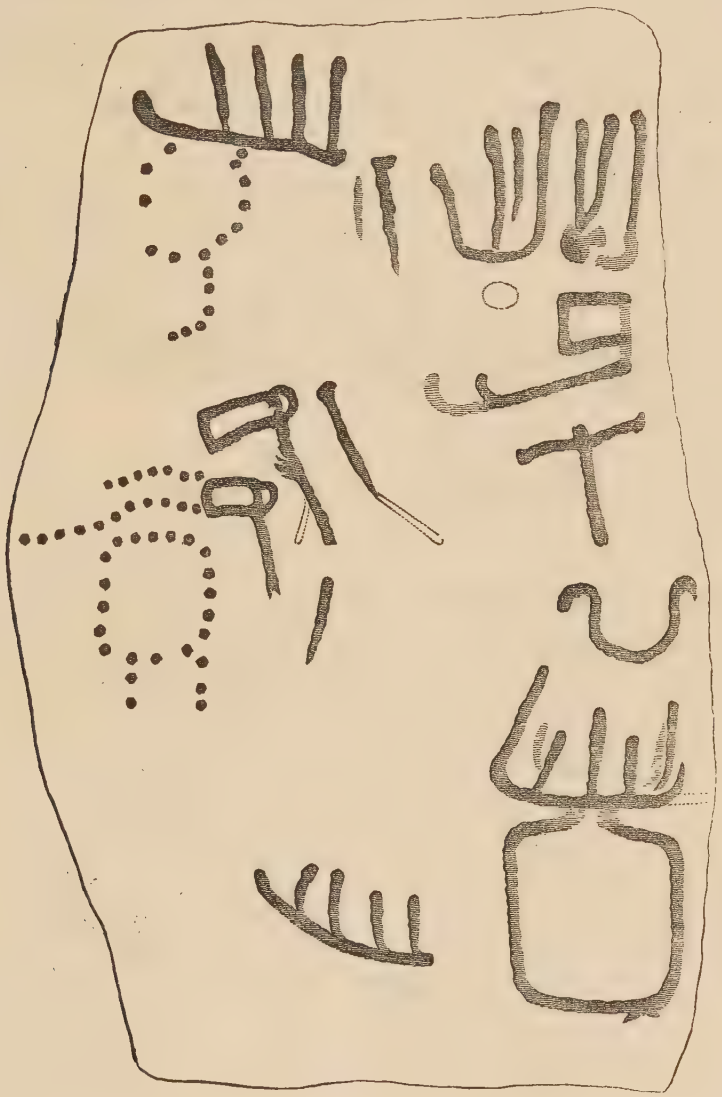

Fig. 24.

not an essential part of the group. In any case its relative position is different on the Locmariaker stone to that at New Grange. But, I think, it is only necessary to look at Sir Samuel Ferguson's drawing to see that

the figure which has been singled out for comparison with that at New Grange, and which, thus separated from the context of the stone, gives a special significance to these two marks, as suggesting a symbol with definite and separable meaning in reference to the particular stone on which it is found, is simply one of a number of similar markings on the stone, which are distinctly of one class, and represent the same object, whatever that may be.

The Scandinavian rock tracings appear to me to furnish conclusive evidence as to the meaning of the markings referred to on the Locmariaker

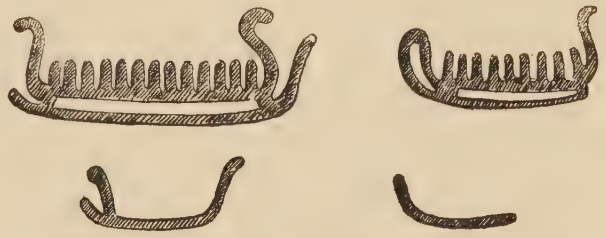

Fig. 25.

stones, and to establish that they are representations of boats, and therefore that the rude sculpturing at New Grange represents also a boat or galley. On bronze implements and rocks boats or galleys are frequently

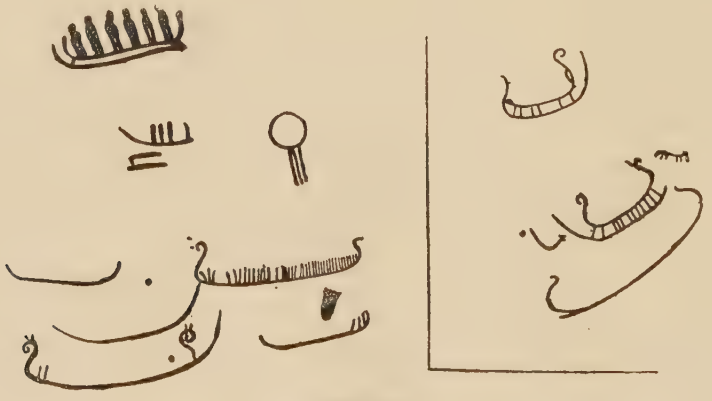

Fig. 26.

represented; generally the high prows and stems are clearly indicated, and often the peculiar double prow is shown. In the rock tracings they

are represented with and without men, apparently according to the fancy of the artist. The figures 25 to 27 are selected as typical examples* :—

Fig. 27.—(Du Chaillu.)

Now, reverting to Sir Samuel Ferguson's Paper, it will be evident that the figures on stone No. 3, at Locmariaker (fig. 28), are distinctly boats, but without men—on one, indeed, three upright strokes are indicated, though not as strongly marked as the rest of the figure. Mr. Fergusson, speaking of the Locmariaker stone, states that "the principal objects represented seem to be intended for boats and hatchets," excluding certain figures, which, he says, though it may be rash to call them writing, may mean numbers or cyphers of some sort. "Their great interest," he adds, "is, however, their similarity to the engravings on Irish monuments." He does not appear to have been aware of the intermediate types I have brought under notice.

Examining, now, the figures on the Locmariaker stone No. 1, that which contains the figure similar to that at New Grange, we see one of the manless boats very clearly marked at the right-hand side, whilst the other markings, with upright lines, appear to me to be indistinguishable from the ruder forms on the Scandinavian stones. If this be so, the figure selected by Mr. Fergusson for comparison with that at New Grange is, clearly, also that of a boat or boats.

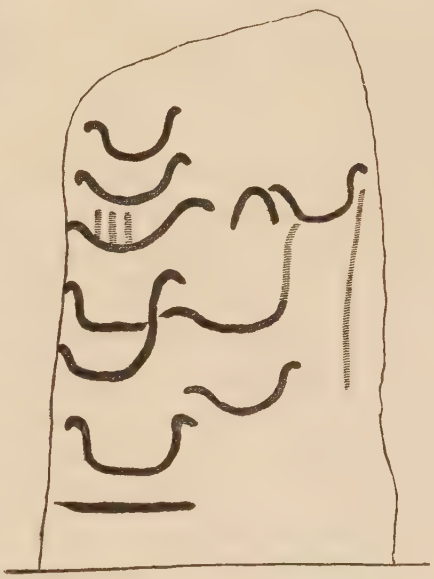

Fig. 28.

* The figures are taken from cuts in M. Oscar Montelius' Paper, "Les Sculptures de Rochers de la Suède," Prehistoric Congress, Stockholm, 1874, vol. i. Several of these cuts are reproduced in Du Chaillu's "Viking Age."

If the figure at New Grange is looked at carefully, sideways, it will be noticed that the right-hand end strokes are curved, and fall in with the suggestion of the prow of a vessel.

The square top to the principal part of the figure may seem an objection to the view I have advanced. This is, however, probably a rude drawing of a sail. On a rock tracing figured by Du Chaillu (p. 118) a boat is represented with a rude loop-shaped projection which may be intended for a sail (fig. 29). And among the rock-tracings (fig. 30) at Järrestad, Scania, a boat occurs in which the mast and rigging is represented.* In later representations of vessels the sail is a prominent feature, with its cross-yard; and notice the curving-in lines of the sides of the sail as suggested in the New Grange figure. In many of the early examples (fig. 31), the mast is not shown above the yard; a further point of coincidence with the New Grange figure is found in the rope (the sheet) attached to the end of the vessel.

Fig. 29.

Fig. 30.

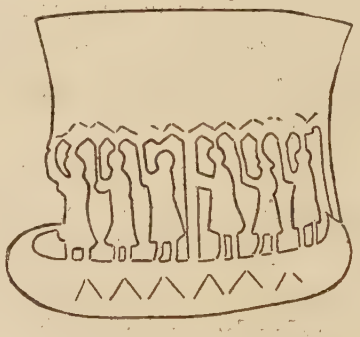

Fig. 31.—Reverse of runic stone, Hallingbo. (Du Chaillu.)

I do not wish to press the interpretation of this figure too strongly. A rude drawing of the kind might, to other eyes, represent something different. It may be best, therefore, in view of its exceptional character to limit positive statement to the expression of an opinion that were the same figure found in company with those on the Locmariaker stones, or among the ruder Scandinavian rock tracings, we would unhesitatingly pronounce it to be a boat.

If it be accepted that the figure under discussion represents some form of boat, it may be asked how are we to account for its presence on one of the stones at New Grange, presenting, as it does, such an excep-

* Sur des Rochers Sculptés découverts en Scanie. M. N.-G. Bruzelius; Prehistoric Congress, Stockholm, vol. I.

tional feature in the tumulus. It might be answered, whatever its interpretation, it is exceptional and wholly out of keeping with the other forms inscribed on the stones of the tumulus. But if, as is most probable, the mound at New Grange was one of those rifled by the Danes in the ninth century, difficulties might be removed by the supposition that some of the intruding Danes cut this figure of one of their galleys on the convenient surface of the stone in question. This is not so far-fetched an idea as might at first seem. When, in the twelfth century, a body of Danes plundered the tomb known as the Maes-Howe in Orkney, they wrote their names in Runes on the walls of the tomb, and recorded in short sentences what they knew of its origin.* I have thought it right to throw out this suggestion in passing, but do not lay stress upon it. It is probable that the Danes, if they had wasted time in cutting this figure, would have left some more definite record of their visit. We must, therefore, I think, accept this marking as contemporary with the decoration of the chamber, and constituting, with the fern leaf, isolated examples of their kind.

We may now resume the course of our argument. I have spoken of the architectural position of the decoration in certain cases. The most notable instance is that of the stone over the entrance. The ornament is cut on the projecting edge of the stone, and fitly marks its horizontal course; and in the lines cut on its upper face a remarkable approximation towards a moulding is shown of a distinctly architectural character (fig. 32). The whole effect of the entrance, with its great carved stone at the bottom and carved course above, suggests, indeed, the rudimentary conception of a façade. Over the opening of the passage into the chamber we find, again, an architectural use of ornament. The lintel stone, as already described, is carved along its edge with dog-tooth, and the horizontal course of the stone thus fitly emphasized (fig. 13). In the east recess we find two additional examples of similar treatment (figs. 11 and 14). In both cases the horizontal course of the stone is decorated, and the ornament, so to speak, coursed with

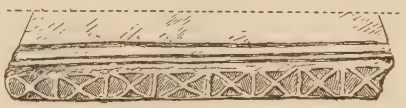

Fig. 32.

* "Proceedings of the Society of Antiquaries of Scotland," vol. v.

the stone. These instances, however rudimentary in character, taken in connexion with the remarkable enterprise shown in the roofing of the chamber, appear to me of much significance, and to indicate architectural promptings of great interest. They strengthen materially the

Fig. 33.

conclusions drawn from the consideration of the ornament itself, and add to the interest of our investigation the suggestion that the monument marks not only the first development of decorative design in Ireland, but

also of architecture. If necessary the argument may be carried a step further by reference to the decorated stones in the sepulchral chamber at Clover Hill, Co. Sligo, one of which is here figured (fig. 33).* The ornamental character of the carving is unmistakable, and represents a marked advance in decorative conception. It furnishes an intermediate example between the treatment of spirals at New Grange and the fully developed Late Celtic type, known in Ireland as the divergent spiral or "trumpet" pattern.

The ornament has been incidentally described as in some cases carved in relief, both on the outside stones and within the chamber. Here, again, we observe a feature which harmonizes with the general character of the design, and indicates the transitional period of the monument. The decoration appears to have been executed with a pick, the pick-marks being in most cases still discernible; whether a bronze or iron tool was used we cannot say. Other considerations point to the probability that the tumulus falls within the overlap of the bronze and iron periods; but, from the nature of the stone, a bronze tool, or a flint, would be sufficient for the purpose. Professor Haddon has directed my attention to some very distinct chisel-marks on the face of stone No. 18, right side of passage. The chisel has been driven sideways, and the marks are quite different from the pick-marks already referred to. They are about three-quarters of an inch long by half an inch broad, and in each cut the marks left by the gapped edge of the chisel are quite distinct. The sharpness of the cuts and gap-marks, and straight edge of the chisel, suggest an iron implement.† The stone at the entrance, and those at *a* and *b*, offer well-defined examples of carving in relief; and in the passage and chamber other instances have been noticed in which the ground has been carefully picked so as to leave the pattern in the flat relief of the natural surface of the stone. We thus find in the tumulus of New Grange the beginning, not only of

* "Journal R. H. A. A.," 4th Series, vol. v., from a block kindly lent by the Royal Society of Antiquaries of Ireland.

† M. E. Cartailhac, referring to the sculptured stones at Gavr'inis, writes :—"Des expériences, qui semblent décisives, exécutées au Musée des antiquités nationales, à Saint-Germain, ont montré que le coin de pierre était parfaitement capable d'opérer par écrasement ces sillons à la surface des granits. Le coin de bronze s'émousse au contraire et ne peut être utilisé dans ce but."—"La France Préhistorique," p. 234.

design and architecture in Ireland, but, we may now add, also of sculpture.

I have left to the last the consideration of the cup-marks, and of two

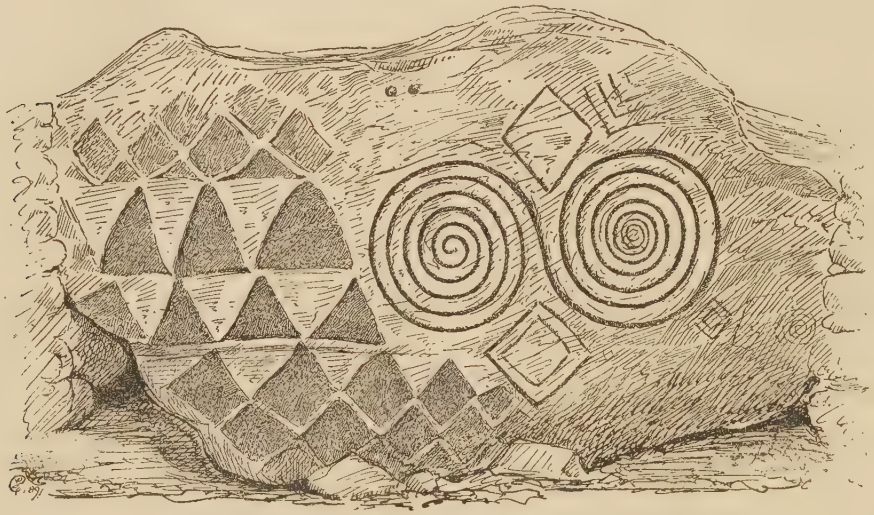

Fig. 34.—Stone *b* on Plan.

curiously ribbed stones mentioned by Sir W. Wilde. The carving on stone *a* (fig. 35) is very remarkable. No example of these cartouche-like figures has, I believe, been previously found in Ireland. The groups of concentric curves, splayed one out of the other, present a striking resemblance to the carving on some of the Gavr'inis stones, and are important in that connexion. Unfortunately it was not possible to photograph the carving. The stone, which, no doubt, was originally placed on edge like that at the entrance and at *b*, has been forced over on its face by the pressure of the mound, and the carving is now on its under side. The earth has been removed beneath it to a depth of about 18 inches, and it is possible to examine the carving, but photographing was quite out of the question. By lying full length under the stone I succeeded, however, in making the drawing here reproduced, and notwithstanding the cramping position in which it was executed, can vouch for its accuracy: the lines were counted, and nothing filled up in haste.

I find no difficulty in accepting as decorative the well-defined cups on

this stone. If we found the curious cartouche-like figure, with the three cups within its oval, unconnected with other forms, we might perhaps attach to it some symbolical or ideographic meaning. But on the present stone it is associated with the spiral and a lozenge or lattice pattern, and, in the general treatment of the carving, presents no feature which should dissociate it from that on the entrance stone and the stone at *b*, further than the occurrence of a new feature in the design. The all-over effect sought is evidently the same as on the other stones referred to, and in the filling-in of the spaces left by the divergent lines of the design with triangular cuttings,

Fig. 35.—Stone *a* on Plan.

which continue the motives of the neighbouring lines, I find the same artistic instinct which determined the position of the lozenges on the entrance stone. It will be noticed that the spaces between the cups are similarly treated. It will be further observed that five well-defined cups are cut on the middle portion of the stone, but are not arranged in any symmetrical form, or surrounded by other cuttings as in the case of the other cups. On the contrary, they interfere with the ornament of the stone, which, especially in the case of the lattice pattern, is cramped and broken by the presence of these cups. The inference is plain; the cups were cut first, and the spirals and lattice afterwards. But this implies something more. It is clear that the cups referred to could have no special significance, otherwise respect would have been shown for them in the cutting of the other ornaments; unless we suppose an interval of time to have elapsed between the two cuttings so great that all tradition of the significance of

the cup-marks had been lost. But the cutting of the cups in question, as regards weathering, does not appear more ancient than that of the other markings, and the more reasonable explanation of the facts would seem to be the following:—The cups in threes were cut in the first instance, and possibly some of the other figures on that portion of the stone; then some of the irregularly placed cups were cut on the body of the stone, without thought of the other figures to follow, or, possibly, two or more persons worked on the stone at the same or different times; when, then, the caprice of the artist having suggested a change of device, the spirals and lattice were cut, the cups were found in the way, and the pattern is broken at these points. We see a similar change of design in stone *b*, one half being quite different from the other. I do not, then, find it necessary to see in the carving of stone *a* any other object than the pleasant diversifying of its surface, as in the case of the two similar stones to which reference has already been made. It must be borne in mind that these primitive carvers had not reached the conception of ordered design, of relation of parts, or unity in treatment. As yet the sense of artistic relation was but little developed, and the artist sought merely to cover the surface of the stones with definite forms, which he had not as yet learned to combine. The fact that the stone at the entrance is artistically the most successful of the three, the design being more continuous, and possessing an artistic unity wholly absent in the other stones, may, indeed, account for its being chosen for the most important position.

But the cup-marks in the passage and chamber require further consideration. I can see no evidence that these cups, when near the edge of the stone, were used to split it, or for the insertion of wedges to lift the stone, as suggested by Sir W. Wilde; they would be wholly unnecessary for the latter purpose. The cups at the edge are clearly of the same character as those on the flat surface of certain of the stones.

I now desire to direct attention to certain features in the working of some of the stones which appear to have been hitherto overlooked, and which would seem to lead up to the question of the cup-markings. If stone No. 17, in the passage, be examined, it will be noticed that, above and below the spirals and chevrons with which the stone is ornamented, the weathered

surface, or skin of the stone, has been carefully picked away. As it were, a panel of the smooth skin has been left, and on it the design has been incised, whilst above and below the limits of the pattern the skin has been completely removed, and the surface roughed by picking. The design on stone No. 20 has been treated the same way. In this instance the ground has been picked so as to leave the pattern in relief; but some attempt has

Fig. 36.—Stone 20, left side of passage.

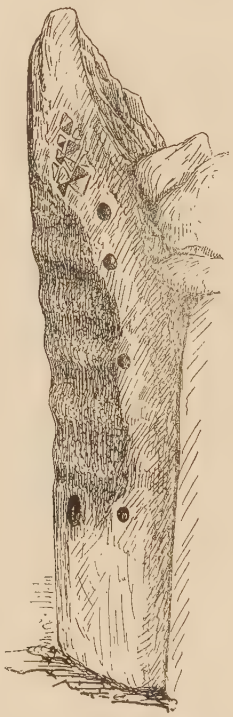

Fig. 37.—Stone 21, right side of passage.

been made to strike a line round the design, and outside the panel thus formed the greater part of the surface of the stone has been picked over. The process was not apparently completed; large patches of the skin remain at the right-hand side of the stone. On close examination it will be found that the majority of the unornamented stones, as well as those bearing devices, have been similarly treated; in some cases the entire surface has been carefully picked over, and the skin completely removed; in others,

patches of the water-worn or weathered surface remain. Stone No. 10, on the left side of the passage, affords an excellent illustration of this; the skin has been removed over about half its surface, and on the remaining portion a number of pick-marks are noticeable, showing where the process had been begun. The curiously ribbed stone, No. 21, at the right-hand end of the passage, has been treated in the manner mentioned. The greater part of its surface has been picked over, including the transverse grooves, which give it a ribbed appearance (fig. 37). Another instance occurs in stone No. 12, on same side, on which three similar grooves are cut; and on the left side of the passage, stone No. 11 is noticeable for a single vertical groove. In all these cases the grooves have not been formed by rubbing, but are picked, or, if in the first instance obtained by friction, were subsequently picked.* Now, across the middle of the remarkable stone *a* (fig. 35), a similar groove has been cut. The cutting of this groove is in no way distinguishable from that of the other figures on the stone, and it appears to have been simply a dividing line struck across the stone according to the fancy of the artist. Its use, however, in association with the decoration of that stone, supplies a link between the grooved stones and the decoration of the chamber. And I am tempted to ask, Is not the roughing of the surface of so many of the stones in the passage and chamber the expression of a decorative instinct of which the grooves and cup-marks are more definite forms ?

The roughing of the stones, whether springing from a whittling motive, or desire to alter the natural appearance of the stone, arising indirectly from a sense of appropriation, or due simply to a sense of artistic fitness, appeals to me as expressing the same decorative feeling seen in the many forms of rusticated masonry at present adopted in architecture. When fresh, the pick-marks must have given a lively and speckled appearance to the surface, which no doubt would be regarded as more effective than its natural state. In the present day forms of rusticated masonry are frequently used in which the surface of the stone is elaborately worked over with irregular chiselings, no attempt whatever being made to give them the appearance of a pattern. A similar feeling is displayed in the various forms of *matting*

* Sir W. Wilde is incorrect in speaking of these grooves as smooth.

with which blank spaces are frequently diversified in carving and metal-work. The roughing of the stones at New Grange I regard, then, as exhibiting a similar motive to that found in rusticated masonry, and the cutting of grooves on the stones in some instances, and of cup-depressions in others, as an extension of that motive. These features, so far from presenting difficulties, if I am right, strengthen the argument of this essay.

The fact that the cup-marks are placed in an irregular, in fact haphazard, way on the stones, may be urged as an objection to the view advanced. But this objection would equally apply, in many instances, to the ornaments cut on the stones. When we come to definite forms, such as a groove or cup-mark, a more complex element enters into the question than in the case of the roughed stones. The introduction of defined form in design implies symmetry or balance of parts. But the art with which we are dealing is as yet at the threshold of design; the need even for symmetry has hardly yet been felt. It is still in that stage in which—as, when a child has learned to draw some definite form, it will cover a blank wall or sheet of paper with repetitions of the figure without regard to position, the wall or paper but serving as a surface on which to display the figure in which interest is solely centred—attention is almost exclusively fixed on the figure of the ornament for its own sake, and the stone is regarded as merely furnishing a surface on which it may be displayed. The fact that cup-marks are not found arranged in a pattern, or in some definite relation to the outline of the stone, is implied in the statement that the builders of the tumulus at New Grange had not reached the conception of a pattern, their ornament being confined, for the most part, to the putting together of simple forms, spirals, lozenges, and chevrons, uncombined and unrelated in any artistic sense. The similar ornaments on spear-heads, urns, &c., show, it is true, a more marked feeling of decoration; the ornament is definitely related to the object, and truly decorates it. But in these cases the limitations of size and shape prompt the application of the ornament, whereas the large surfaces and irregular shapes of the stones might well present difficulties of treatment beyond the capacity of primitive art. We do, indeed, find, as in the case of the stone above the entrance, and other instances in the chamber, that, where the limited surface of the

projecting face of the stone narrows the conditions, a more appropriate treatment of the ornament is obtained, and in the successful all-over treatment of the stone before the entrance we find a striking indication of a development in decorative sense.

The view here advanced is supported as, if correct, we should expect to find by the decoration of other objects. In the cinerary urns, and other fictile vessels, a frequent mode of decoration consists of a number of punctured indentations made, apparently, with the end of a slender stick or bone. In most of the Irish urns they are fairly regular in arrangement, but on some of the English and Scotch examples they are quite irregular.* But even in the case of the Irish urns, the relation of the irregularly placed cup-marks at New Grange, to the more orderly arrangement of punctured dots on the urns, is not more remote than that between the irregularly spaced forms of definite ornament, chevron, lozenge, and dog-tooth, and the orderly arrangement of these forms on the urns. Stone No. 1, in the chamber, the surface of which is covered with irregular, oval pit-marks, three or four inches in length, would seem to enforce this point; but doubt has been expressed as to whether the markings on this stone are not partly natural.

The views here expressed with regard to the cup-marks at New Grange are to be understood as confined to their present application. It is possible that the cup-marks on some of the stones (for instance, stone No. 6, right side of passage, on the surface of which are a number of irregularly spaced cups, from two to four inches in diameter) may have been cut before the stones were selected for the tumulus, and may therefore be classed with archaic cup-marks generally. But I see no evidence that in the use of such stones in the tumulus they can be in any way distinguished as regards position or display of markings, from the other stones of the structure, and am forced to the conclusion that whether or not the cup-marks were in all instances originally associated with the tumulus, they serve a decorative purpose, if any, in the present instance. The general question of archaic cup-markings appears to me to be obscured by the supposition implied in most of the theories advanced on the subject, that a

* See Greenwell's "British Barrows," figs. 54, 56, 58, and 142.

single explanation is to be found for all examples. Professor Haddon, in his recent investigations on savage art in the Torres Straits, has shown how cautious we must be in drawing conclusions as to the connexion between similar forms in different countries, and how far astray we may be led by comparative tables of design. I therefore would be understood to feel my way cautiously, only setting down so much as appears to be fairly supported by the facts in the present case, and with due limitation to the particular case under discussion.

One other point of interest deserves to be mentioned in connexion with the inscribed stones. Sir W. Wilde was struck by a remarkable circumstance when investigating the tumulus. He found that the carvings, "not only covered portions of the stones exposed to view, but extended over those surfaces which, until some recent dilapidation, were completely concealed from view, and where a tool could not have reached them." And he adds: "The inference is plain, that these stones were carved prior to their being placed in their present position; perhaps were used for some anterior purpose. If so, how much it adds to their antiquity!"*

Fig. 38.

Figure 38 is the most striking instance in point. The spirals inscribed on the under surface of this stone have been disclosed by the falling out of several of the stones which formed the packing. The carving of the roof-stone of the east recess also extends beyond the portion of the stone exposed, and is partly concealed by the stones on which it rests. This feature would be remarkable, and afford occasion for interesting speculation were it peculiar to New Grange; but it appears to be usual in such structures. It occurs at Loughcrew. In the description of the roofing stone of the western chamber of the principal tumulus on the Loughcrew hills, Mr. Conwell says: "Above the upright stones forming its walls are observed seven projecting flags, forming a beehive roof, capped by a large

* "Boyne and Blackwater," p. 199.

horizontal flag elaborately covered with devices, several of which extend out of sight under the structure, and where no tool could reach; again affording evidence that the sculptures upon this stone also must have been executed before the erection of the carn."*

The same feature is found in the tumulus of Gavr'inis, in Brittany. In 1884 Dr. de Closmadeuc had some of the stones of the flooring of that remarkable structure raised, and found that the edge-face of one of these stones was inscribed. The carving on some of the wall-stones was also found to extend below the floor, and the side faces of some of these stones were carved.† The investigations brought to light carvings which had remained hidden up to then, and established the fact that the blocks were prepared and sculptured before being placed in position.‡

Wilde mentions a point in connexion with the carving on the stone (fig. 38) which he appears to have recognized as rather telling against the supposition that these carved stones were used for some anterior purpose. The flag in question has, as he remarks, "a sort of skin, or brownish outer polish, as if water-washed. Now, in all the exposed carvings on the other stones, the indentures have assumed more or less of the dark colour and polish around; whereas in this one the colour of the cutting and the track of the tool is just as fresh as if done but yesterday. It must have been effected immediately before the stone was placed in its present position."§

The explanation of the apparent anomaly in the concealment of portions of the carvings is, perhaps, not far to seek. It is evident from the positions of many of the stones, such as the roof-stone of the east recess, apart from other considerations, that the majority of the stones must have been carved before being placed in their present positions. Again, the stones could hardly have been carved in the dark, or with the artificial light at the disposal of the builders. All the circumstances of convenience point to the carving of the stones before erection.

* Conwell, p. 39.

† "Revue Archéologique," 3rd Series, vol. iv., p. 325.

‡ "Enfin, nos fouilles ont mis en évidence des gravures lapidaires qui étaient restées cachées jusqu'ici, établissant, d'une façon incontestable, que les constructeurs de nos dolmens preparaient leurs blocs et les sculptaient avant de les mettre en place pour former le monument."

§ "Boyne and Blackwater," p. 200.

We do not draw much on imagination if we assume as the probable course of construction that the stones were first collected on the site, and were, in many instances, carved on the spot without definite reference to the position they would occupy in the structure. The builders appear to have endeavoured, as far as possible, to display the carved portions of the stones, but it is probable that in some cases the stones were found suitable for positions in which it was not possible to do so, and the decoration was sacrificed to the needs of construction. We are dealing with a people with whom carving in stone was as yet in an experimental stage. They were, probably expert carvers in wood, and accustomed to cover the shafts of their weapons with elaborate carvings. In working in stone, they would be led by artistic habit, as in the carving of a spear-shaft, to look on the stone as the final repository of the ornament, and would hardly consider its relation to the proposed structure; an advance in art which would come later, and would, in fact, denote a more defined conception of architecture than we find in the monument—though the first promptings of architectural art may be recognized in its construction and disposal of ornament.

I have now completed the examination of the carved and inscribed stones in the tumulus. Whether or not the reader will go with me the whole length of the argument, which includes the cup-marks as portion of the decorative treatment of the tumulus, I feel satisfied that as regards the carved and inscribed figures there is not room for doubt. Unless we fall back on mere conjecture, and discard the positive evidence of the treatment of the carvings, and the wide range of objects on which similar ornaments are found, we are, it would appear to me, forced to the conclusion that no ideographic or symbolic meaning is hidden in these carvings; that they serve simply the purpose of decoration.

II.—DOWTH.

In the fields adjoining the great tumulus at New Grange, some smaller tumuli deserve notice before proceeding to the mound at Dowth.

Below the great mound of New Grange two well-defined tumuli may be seen showing as conical grass-covered hillocks on the low-lying land by the

river. They are marked A and B on map. "A" is 220 feet in circumference and about 20 feet high; "B" 300 feet in circumference and about the same height. The measurements are approximate. "A" appears to have been encircled at a distance of about 200 feet from the mound, by a vallum, a portion of which is still traceable at the east side. These mounds have probably been plundered, but are at present evenly grass-grown.

Fig. 39.—Standing Stone C on Map.

On the brow of the steep bank which rises at some distance behind these grave mounds a great block of compact sandstone grit has been set on end, and forms a most remarkable standing stone ("C"), (fig. 39), similar to, but larger than, those set round the great mound. It measures 10 feet high, and is 17 feet in girth. In the adjoining field a similar standing stone will be found, but it is not so large. In the field to the left are several large stones (see map), probably the remains of some sepulchral monument. At

the top of the next field is one of the most remarkable of the lesser tumuli marked "E" on map. Its base is enclosed by a well-defined circle of boundary stones. It measures about 280 feet in circumference and 12 feet in height.

Walking across the fields towards Dowth we pass the mounds "F," "G," "H" on map. The long mound "G" is of unusual shape; it is about 150 feet in length by 60 in width and 10 high. From the depressions in the surfaces of these mounds we may conclude that they have been plundered. At the far side of the great mound of Dowth, in the grounds at the back of Dowth House, are two smaller tumuli, one of which ("J") is open from the top. The centre of the latter consists of a corbel-roofed chamber, formed of flags laid on the plan of an irregular hexagon. The chamber thus formed is about 8 feet high and 10 feet in diameter. Five cells are placed round the sides, formed by small flags set on edge; no trace of a passage is apparent, but probably a short passage exists; none of the stones are inscribed.

In Dowth demesne, in the same field as the great ring fort, said to be the second largest in Ireland, at a place marked Cloghlea on map, Wilde mentions there being "a portion of a stone circle, evidently a part of the side wall or basement of a sepulchral chamber similar to New Grange." "Human remains have," he adds, "on more than one occasion been found in the vicinity of this remnant of an ancient tumulus."

When Pownall saw this circle eleven stones were in position. He says:—"I paced this circle, and, as well as I recollect, it is not above 21 feet. The stones are large and massive, and about 5 and 6 feet high. There remain eight of these stones together in one part of the circle; two in another part, and one by itself. On the left hand from the entrance into the circle lies a large flat stone, which seems to have been either the top of a kistvaen or a cromlech."

The great tumulus at Dowth appears to have been about the same size as that at New Grange, and agrees closely in its present measurements with the latter. It averages in height about 47 feet, and 280 feet in diameter. The base is surrounded by a curb of large stones set on edge as at New Grange, but it is not encircled by any retaining wall. No trace of

an outside circle of standing stones exists, nor are any found at Knowth. New Grange would appear in this respect, as in others, exceptional, and was no doubt the most important monument in the group. The accompanying plans and sections, based on those published by Sir Thomas Deane, but with additional measurements,* will show the general features of the mound and chambers at Dowth.

It is not known when the entrance to the tumulus was discovered. Previous to its exploration by a committee of the Royal Irish Academy in 1847, a

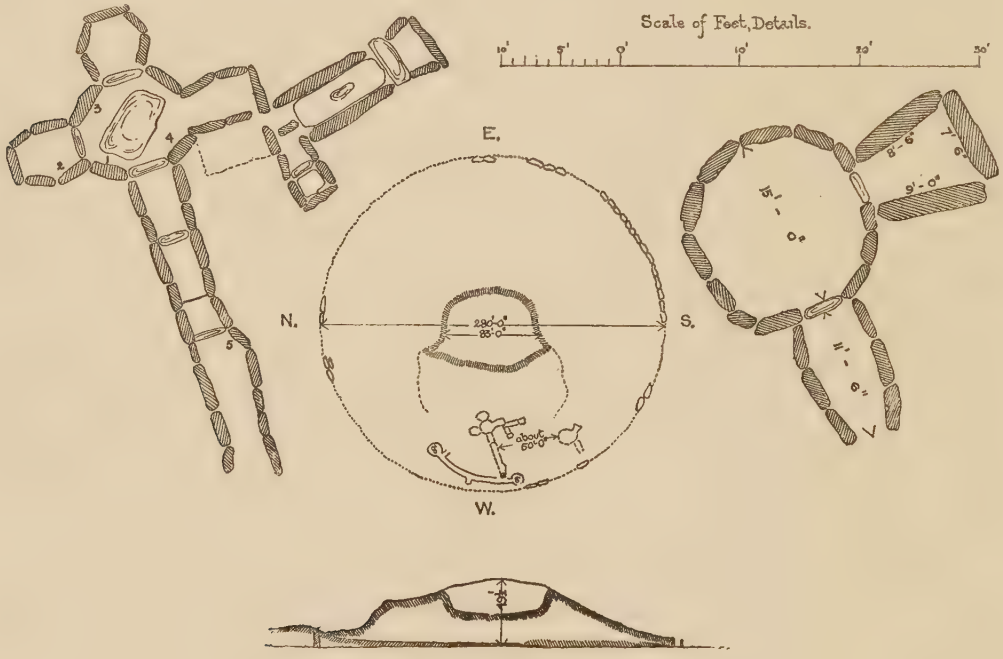

Fig. 40.—Plan and Section of Tumulus at Dowth.

considerable gap, Wilde says, existed in the western face of the mound, caused by stones having been removed for buildings or macadamizing materials for the adjoining road. In this excavation a passage somewhat similar to that at New Grange had long been exposed, but it was not possible to follow it for more than a few yards on either side. "Whether," he adds, "this passage was that originally broken open by Amlaf and his plundering Danes, it is difficult to determine."

* Proceedings R. I. A., 3rd Series, vol. I.

Unfortunately no official record exists of the exploration of the tumulus by the Royal Irish Academy. Plans and drawings appear to have been made, but no trace of them can now be found. Indeed, the mound was so pulled about by the explorers, and the work carried out with such doubtful wisdom, that the committee seem to have had a not unnatural shrinking from publicity. We have, therefore, to fall back on Sir William Wilde's brief account of the excavations, which may be summarised as follows:—In 1847, the Committee of Antiquities of the Royal Irish Academy obtained permission from the trustees of the Netterville Charity, the present proprietors of the Dowth estate, to explore the mound. Funds were procured, chiefly by subscription, and the Board of Works supplied the tools and plant for the excavations. The direction of the work was committed to Mr. Frith, one of the County Dublin surveyors. Opinions were divided as to whether a perpendicular shaft should be sunk from the top, or a horizontal tunnel driven from one of the sides to the centre. The loose material of which the mound is composed presented objections to both of these plans, and it was finally decided to follow up the passage already open on the west side. Following this passage eastward, the cruciform chamber and minor chambers shown on Plan, fig. 40, were reached. When the chamber was opened "only a portion" of the stone basin at present in the centre "was discovered in that locality, but all the fragments, nine in number, have since been recovered in the chambers and passages around, and now complete the entire." The cutting was continued to the centre of the mound, which explains the present crater-like hollow which disfigures the tumulus.

No central chamber was discovered, although the centre was reached; but Wilde adds, "It is possible, however, that there may be instead a number of minor crypts existing in the circumference of this great hill." This conjecture has been partly confirmed by the recent discovery of two communicating chambers a little to the south of the main chamber (see Plan).

The following passage, which I extract in full, I regret to say, is the only record which appears to exist of the objects found during the excavations:—

"During the excavations some very interesting relics and antiquities

were discovered. Among the stones which form the great heap, or cairn, were found a number of globular stone shot, about the size of grape-shot, probably sling stones, and also fragments of human heads; within the chamber, mixed with the clay and dust which had accumulated, were found a quantity of bones, consisting of heaps, as well as scattered fragments, of burnt bones, many of which proved to be human; also several unburnt bones of horses, pigs, deer, and birds, with portions of the heads of the short-horned variety of the ox, similar to those found at Dunshaughlin, and the head of a fox. Glass and amber beads, of unique shapes, portions of jet bracelets, a curious stone button or fibula, bone bodkins, copper pins, and iron knives and rings, the two latter similar to those found at Dunshaughlin, were also picked up. Some years ago a gentleman, who then resided in the neighbourhood, cleared out a portion of the passage, and found a few iron antiquities, some bones of mammals, and a small stone urn, which he lately presented to the Academy."

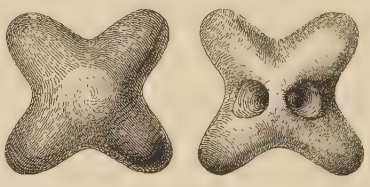

Fig. 41.—Stone Bead found at Dowth.

In 1885, some further excavations were made under the direction of Sir Thomas Deane. To the south of the chamber already open, a circular chamber and inner chamber opening from it were discovered. The former was found in a roofless condition, and has since been roofed in with concrete. It is entered by a short passage, the roofing flags of which remain; the roofing flags of the inner chamber are also in position. Further indications of subterranean passages led to additional discoveries, the particulars of which I quote in full*:—

"Commencing at the northern side of the known entrance to the central chamber, an opening was made which led to a passage which terminated at either end by circular cells carefully roofed with corbelling stones. In this passage were found a quantity of bones, mostly of horses and lower animals, but none human. The passage had an incline to the south. On emerging from it at the point where it met the entrance to the originally known chamber a flight of steps was discovered. I have no doubt that

* Proceedings R. I. A., 3rd Series, vol. I., p. 161.

these chambers were approached only by this passage, and that the entrance used for many years was made for investigation of the contents of the central portion. In the circular cell of the southern end of the curved passage were found these articles—a bronze pin, a buckle, and an iron dagger" (see Plan, fig. 40).

Sir Thomas Deane is of opinion that the central chamber was originally approached through this curved passage. In this I cannot agree: the passage referred to and steps leading into the central passage appear to me to be a comparatively recent addition. As pointed out by Mr. G. H. Orpen, the character of the work is quite different.* The cells (fig. 42), which are of the usual bee-hive form, and curved passage are built of semi-coursed dry rubble, the latter roofed with flagstones; they are, in fact, microlithic. The passage

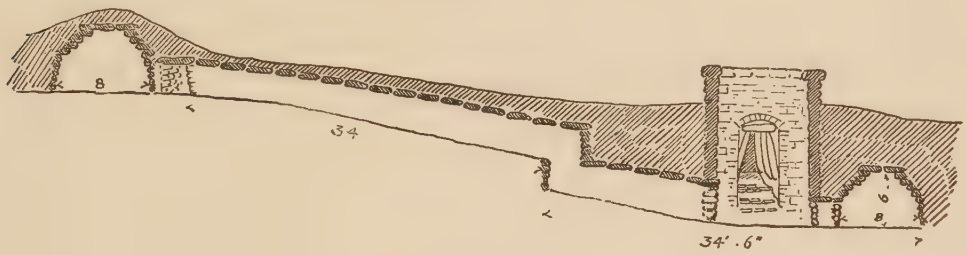

Fig. 42.—Section of Bee-hive cells and passage at Dowth.

and chambers of the tumulus are, on the contrary, of megalithic or true rude-stone construction. Again, the three steps which lead up to the central passage are built of small coursed stones. If these steps, which would, in any case, form a remarkable feature in the tumulus, were part of the original design, we should expect to find them formed of great flags, in keeping with the general construction. The tumulus is possibly older, or at least of an earlier type than that of New Grange, and the projecting sills in the passage are a conspicuous feature. We have, indeed, in these sills a feature in the construction which would have led directly to the use of similar stones for the steps, were the latter contemporary with the tumulus.

The two bee-hive cells and connecting passage appear to be a typical

* "Journal of Royal Society of Antiquaries of Ireland," 5th Series, vol. I., p. 150.

example of the subterranean chambers, when associated with raths called rath-caves, so frequently found in Ireland. Very similar chambers may be seen at Clady, some distance higher up the Boyne, the dimensions of the cells and passage of which agree closely with those at Dowth. The abrupt step about the middle of the passage of the latter also occurs at Clady.* Similar cells and passages have been noticed in the neighbourhood of Loughcrew.† Such subterranean chambers, in one form or another, appear to have been widely adopted in the earlier stages of civilization. Their particular use, the object of certain of their most notable features, has not been finally settled, but the evidence on the subject is sufficient to establish that they were used as winter-dwellings, store-houses and granaries, and at times as places of refuge.‡ In construction and position these subterranean chambers differ from the chambered tumuli, and it will not be doubted that, as a rule, they are of much more recent date. They appear to have been rarely, if ever, used as places of burial. The evidence of the objects found in them rather points to their having been occupied as dwellings. Objects of iron are frequently found, and in several cases Ogham stones have been used in the roofing. These facts suggest a comparatively late date for these structures. The connexion between the bee-hive cells at Dowth and the chamber of the tumulus is therefore not a little perplexing.

We know that the Boyne tumuli were plundered by the Danes about the year 862, if not earlier. The incident is recorded in the "Annals of Ulster" under that year, and in the "Annals of the Four Masters" under the year 861. The cave of Achad-Aldai (supposed to be New Grange), of Cnodhba (Knowth), and of the grave of Boadan, over Dubadh (Dowth), together with that of the wife of Gobhaun at Drochat-atha (Drogheda), are

* See Plans and Sections in Mr. Orpen's Paper, "Proceedings R. S. A. I.," 5th Series, vol. I. Speaking of the chambers at Dowth, Mr. Orpen says: "These bee-hive cells and connecting passages are of microlithic work, and are of an essentially similar type to the cells and passages at Clady and elsewhere."

† Conwell, "Proceedings R. I. A.," vol. IX., p. 48.

‡ See F. C. Spurrell's Paper on *Deneholes*, "Archæological Journal," vols. XXXVIII. and XXXIX.; Anderson's "Scotland in Pagan Times: Iron Age"; and Schrader and Jevons' "Prehistoric Antiquities of the Aryan People," chap. IX.; also, in this connexion, Report on Rath Souterrain, near Ardfinnan, Co. Tipperary, "Journal R. H. A. S. I.," 4th Series, vol. IV., p. 207.

specially mentioned as having been plundered. In the "Annals of Ulster" these "caves" (excepting that of the wife of Gobhaun, which is not mentioned) are described as having been "searched by the foreigners," and the passage continues: *quod antea non perfectum est*—"which had not been done before." It is possible that the "cave of the grave of Boadan" might apply to some of the lesser mounds, several of which are found at Dowth, and the words "which had not been done before" might imply that the particular "caves" mentioned had escaped plunder on the occasion of a previous raid. But it would seem more probable that the three caves are particularly mentioned as being the most important, and that the tumuli referred to are the three most prominent mounds now known as Knowth, New Grange, and Dowth. In any case the plundering of Dowth is fixed by the "Annals" as not later than the year 862.

The character of the construction of the bee-hive cells being later than that of the tumulus, and the purpose different, we are led to the conclusion that these cells were formed at some time subsequent to the breaking open of the tumulus by the Danes. The steps leading to the chamber of the tumuli would appear to have been made with a view of utilizing the latter as an extension of the system of cells, whether for the purposes of dwelling, storage, or retreat. The question then arises, Can the date of such subterranean structures be brought down so late as the tenth century? The late Sir Samuel Ferguson was of opinion that a rath cave, with bee-hive cell, near Seaforth, Co. Down, described in Dubourdieu's Statistical Survey of the Co. Down, 1802, but unfortunately destroyed shortly after that date, might, from the character of a Christian inscription found in the cave, be ascribed to a period probably subsequent to the ninth or tenth centuries. In the "Wars of the Gaedhil with the Gaill" mention is made among the exploits of Amlaf (the White) of the suffocating of Muchdaighren, son of Reachtabrat, "in a cave."* And in the same work it is stated, in reference to the plundering of Leinster and Munster by Baraird and Amlaf's son about the year 866, that "they left not a cave there under ground that they did not explore."†

* Edited by Rev. J. H. Todd, D.D., p. 23. † *Ibid.*, p. 25.

These references are not very satisfying, but they seem to tend towards the occupation of such structures within the period of the Danish invasions. But I rely for positive evidence on the character of the objects found in the tumulus of Dowth. Unfortunately I have not been able, so far, to identify, in the collection of the Royal Irish Academy, the objects described by Wilde. In the early years of the Museum the registers appear to have been carelessly kept, and the "finds" distributed according to a hard-and-fast "three-ages" classification by material—stone, bronze, and iron—so that at present much confusion exists in portions of the collection. But Wilde, who took great interest in the Dunshaughlin crannoge finds, and was present at some of the diggings, distinctly states that the iron rings and knives found in the tumulus at Dowth were similar to those found at Dunshaughlin. This would bring the date of the iron objects found at Dowth down to as late as the ninth or tenth century.

Hitherto the anomaly thus established has been accounted for by the supposition that such iron objects, knives, &c., were dropped by the Danes when the tumulus was plundered. But even raiding parties are hardly likely to have dropped articles of some value about in this fashion. They are now satisfactorily accounted for by the discovery of the bee-hive cells communicating with the tumulus, and are consistent with the adaptation of the latter to the purposes for which these cells were constructed at a comparatively late date.*

The objection may be raised that it is unlikely a tumulus would have been made use of in this way. In reply to this objection it may be stated that the proximity of rath-caves containing Ogham inscriptions to killeens, or disused burial grounds, has been well established by Brash.† Many instances of churches erected near tumuli have also been noticed in the County Down, and of artificial caves in the immediate neighbourhood

* I have examined the objects found by Sir Thomas Deane in the southern cell. The iron object can hardly be described as a dagger. It is spike-shaped with a tang, measuring 4 inches in total length, and is more like a light lance point. The object described as a buckle is an ordinary ring pin, the pin of which measures 9 inches. The other pin has an ornament of cross-hatching, or thistle pattern, on the head. The pins are probably of the tenth century.

† See, for example, the cave of Drumloghan, Proceedings R. I. A., vol. x.

of ancient churches. The conditions appear therefore not to be wholly exceptional at Dowth, and it is possible that the adjoining ancient church of Dowth was in some manner associated with the rath-caves in question.

In construction the chambers of Dowth are similar to New Grange, with the exception that the roofing flags are not corbelled, and in general less architectural enterprise is shown. The flags roofing the central chamber are of great size, and rest directly on the upright lining stones of the chamber. The latter are, if anything, rather larger than at New Grange, and in some cases measure between 10 and 11 feet in height. The plan of the principal chamber is, as at New Grange, cruciform, but smaller. It is 11 feet high, and about 9 feet in diameter. The passage measures 27 feet in length. The entrance has been recently protected by masonry, and it is not now possible to make out its original form. The accompanying illustration, taken from Wilde's "Boyne and Blackwater," shows its appearance as left by the Academy. The portion above the lintel is modern, the stones having been replaced by the workmen, but the cut, Wilde states, gives a good idea of the passage. Across the passage are placed three projecting stones (see Plan), and at the entry into the central chamber and before two of the side chambers, similar sill-stones are found. The latter are smaller than at New Grange, and do not contain slabs or basins. At the end of the right-hand chamber it is possible to pass round the stone at the right side, and then enter the additional chambers shown on Plan. The chamber, going forward, is 8 feet 6 in. long, and is floored by a great flag 8 feet in length, in the centre of which a curious oval hollow has apparently been rubbed down. At the end of this chamber a smaller one, 2 feet 6 in. by about 3 feet 6 in., is divided off from it by a high sill-stone, and closed in at the back by the roof, which slopes to the ground at this point. The two

Fig. 43.

chambers, one within the other, at right angles to those described, measure about 2 feet each in depth. The furthest in is divided off by a sill-stone, and a flat slab rests on its floor.

The two chambers, with separate entrance to the south of the principal chambers, do not require detailed description. In construction they are of the same general character. Sill-stones are found at the end of the passage leading into the circular chamber, and at the opening into the inner chamber. The first stone at the right-hand side of the passage is deserving of notice. A wide and deep groove is sunk in its face, showing nearly two feet above ground, and measuring about eight inches in width and three in depth. It is similar to that shown in the illustration of a grooved door-post at the entrance to the passage at Killan Cormac tumulus.* Sir Samuel Ferguson describes the latter as probably connected with the mode of securing the entrance by flags dropped into the groove, and remarks that the corresponding stones at the sides are wanting. At Dowth but a single grooved stone is found, as at Killan Cormac, and though probably its object has been rightly interpreted, it is not quite clear how it was used. The stone at Dowth is, in any case, interesting as presenting a second example of such grooves.

Inscribed Stones.—Fergusson, in "Rude Stone Monuments," speaks of the carvings of the chambers at Dowth as similar to those at New Grange, "but, on the whole, more delicate and refined." This is a strange misstatement, and probably due to hasty inspection. The inscribings at Dowth are much ruder than at New Grange, and quite devoid of artistic suggestion. They partake rather of the character of scribblings, though one or two definite forms are possibly more advanced than at New Grange. Fergusson further remarks that, "though spirals are frequent, the Dowth ornaments assumed more of free traced vegetable forms," and, "at other times," he adds, "forms are introduced which a fanciful antiquary might suppose were intended for serpents, or writing, or, at all events, as having some occult meaning." The cuts given in illustration of these statements, taken from rubbings, as will be seen by comparison with the present illustrations, do not at all accurately represent the figures

* Proceedings R. I. A., 2nd Series, vol. I., p. 125.

on the stones. Rubbings are not, indeed, very reliable in such cases. In fig. 70, Fergusson, p. 211, the midrib which lends so much of the vegetable form to the figure, is really the edge of the stone, and the marking right and left is on adjoining faces, and not, as apparently represented, on a flat surface. The cuts referred to further err by omission of the various other forms carved on the same stone, and convey a false impression by being thus isolated from the context, so to speak, of the stone. See fig. 44, and photographs of portions of the same stone. Plate VI., figs. 1 and 2.

Fig. 44.—Stone 4.

The outside circle of boundary stones at Dowth is covered in places, but as far as the stones can be examined, with one exception, they are devoid of markings. The stone mentioned as exceptional will be found at the east side of the mound. The figures inscribed on this stone are insignificant in appearance, and may be easily overlooked (fig. 45), but the curious leaf-like figure is of much interest from the fact that the same figure is found on stone No. 5 in the passage, and the close resemblance it bears to certain figures inscribed on the stones of the Loughcrew cairns.

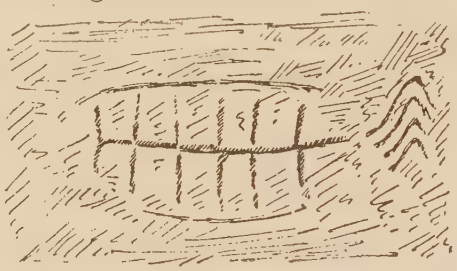

Fig. 45.

The inscribings or carvings at Dowth are, as stated, in general more of the character of scribblings than at New Grange. Some of the more definite forms present analogies to the Loughcrew carvings, and may possibly represent particular objects as in the case of the rock pictures at Santa Barbara, California, and other rock-markings of the North American Indians.* But, I believe, as in the case of New Grange, the chief motive of the carvings is decorative, and that, though possibly some few may represent familiar objects, now unrecognizable, no

* Smithsonian Institution : Publications of the Bureau of Ethnology, vol. IV.

symbolical or religious meaning is hidden in them. Before proceeding with the figures already referred to, it will be convenient to notice a strongly marked example in the passage, stone No. 5 (Plate VI., fig. 3).

In the markings on this stone we have an example of the same art we found at New Grange. The treatment of concentric curves is strongly marked. The leaf-like figure below the circle at first glance recalls the mirror and comb devices of the Scotch stones; but the treatment of the circles points towards decoration, not to symbolism, and the lower figure is more probably to be associated with certain forms found at Loughcrew, but of uncertain character. The circles and concentric curves may be said to be identical with similar markings cut on the tops of two of three

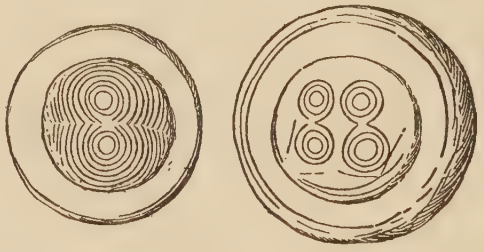

Fig. 46.

chalk objects lately found in a barrow in the parish of Folkton, Yorkshire* (fig. 46).

The ornamentation on the third of these objects consists of a set of concentric circles, from the outside of which issue four triangular points like those of a star, having a plain surface, the space between being filled by hatching. The patterns on the sides of the three consist of raised bands and incised lines, the spaces being decorated with chevrons, lozenges, and dogtooth ; in some cases the spaces between the ornamental bands are halved and hatched in a characteristic manner.

Speaking of these objects, Canon Greenwell says:—"The most remarkable and valuable discovery has been of the three chalk objects found in association with the body of a young child in barrow, No. CCXLV. Nothing whatever of the kind, or indeed of any object of a similar nature,

* "Archæologia," vol. LII., p. 25.

has before been met with; they are quite novel in material, form, and, to a certain extent, in their ornamentation. That they belong to the bronze age may, I think, be predicted with certainty, not only on account of the circumstances surrounding them, but also from the character of the patterns upon them." The ornamentation, he adds, with the exception of the concentric circles, consists of combinations of straight lines such as are found in the work of many and widely separated peoples in a primitive condition. With reference to a rude representation of a human face on these objects, Canon Greenwell thinks it must be considered as the principal feature, and, if we are ever able to ascertain their original intention, that it will probably be found, through an explanation, probably a religious one, of its significancy. Beyond the resemblance to the so-called owl-heads found on vases at Hissarlik, there appears to be little to support this opinion. And the fact that similar objects have never been found in the English barrows, and that these were found in the grave of a young child, would seem to furnish objections to any supposed religious meaning in reference to the interment in which they were found.

In the present connexion I am, however, interested in these objects as furnishing examples of the treatment of concentric curves referred to at p. 24, and more especially as associating the figures which so closely resemble them at Dowth with the ornament of the bronze age. This is the more important as in Dowth no examples of the lozenge, dogtooth, or true chevron, forms of ornament characteristic of the bronze period, are found.

A few other stones are inscribed in the passage, but the markings are unimportant; one bears a sort of comb-like figure resembling some of the figures in the chamber.

The most elaborately inscribed stone in the chamber is that immediately to the right of the passage, No. 4, some of the figures on which have already been referred to in connexion with Fergusson's cuts. Two well-defined spirals are incised on its principal face; and right and left of the edge are markings which recall the fern-leaf of New Grange, but resemble more definitely the herring-bone or tree pattern of the celts and urns. The curious comb-like figures may represent some definite object, but what we can hardly say. The zigzag markings above these lead us

somewhat farther, and on these I would lay some stress. They resemble the zigzag markings on the roof of the east recess at New Grange, but are less regular. But in the slightly curved form of the lines they so distinctly reproduce a characteristic feature, a sort of swing of the hand, of some of the engraved ornaments of the Bronze and early Iron Periods, that I do not hesitate to class them with such forms of decoration. See the zigzags on the bone comb, fig. 7, and the engraved zigzags which enrich the border lines of the dagger, fig. 17.* The other figures on this face of the stone do not call for comment. On the edge or passage face is a well-defined example of concentric circles. Above this figure are two smaller cuttings of concentric circles. The principal set of circles is incorrectly rendered by Fergusson as a spiral ("Rude Stone Monuments," fig. 71). Fergusson's cut is from a rubbing, but it will be seen from the photograph (Plate VI., fig. 2) that some of the lines are thrown out by a flaw in the stone, and that the spiral appearance thus given to the inner circles is not intentional. A radial line is shown in the photograph, after the manner of the well-known circle and gutter markings. I doubt, however, that this mark is intentional. It is not shown in Fergusson's figure, and in cutting is not at all of the definite character of the circles; it is loose and feeble in form, and looks like an accidental mark or one made subsequent to the circles, and not really portion of the original figure. Towards the bottom of the stone is a strongly-marked square-headed zigzag cutting. This has been thought to represent a serpent; and when isolated in conjunction with one of the circles a plausible case may be made out for symbolism. But I see no reason to dissociate it from the other figures on the stone, which, taken as a whole, do not, I believe, support any theory of symbolism.

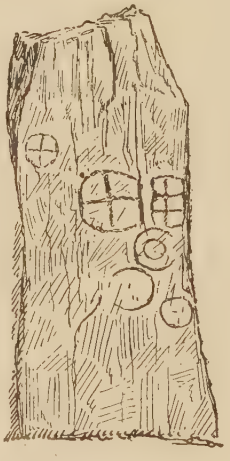

Fig. 47.—Stone 2.

On stone No. 1, at the opposite side of the passage, a set of rather irregular concentric circles is cut about the middle of the stone. This is the only marking on this stone. Stone

* Another example will be found on a bronze cube figured in "Nordiske Fortidsminder," 1890, p. 4.

No. 2, which stands about 2 feet 6 in. above ground, is inscribed on the side facing the central chamber with cross and circle markings, to be referred to presently.

Stone No. 3, at the opposite side of the chamber, presents some unusual types. The flower-like figure resembles some of the figures at Loughcrew, the carvings of which, in general, present many points of likeness to those at Dowth. The neighbouring surface is described by Wilde as picked away, and an attempt made to give relief to the carving. I am not able to confirm this statement, nor are any examples of carving in relief found at Dowth, with the exception of two figures in the southern chamber. The other figures in this group, consisting of a cross within a double circle, and wheel-like figures, appear to me late in character, and may be emblematical, though the cutting, which is of the usual picked character, would seem to rank them with the other devices of the chamber. An unusually deep cup-hollow forms a remarkable feature on this stone. To

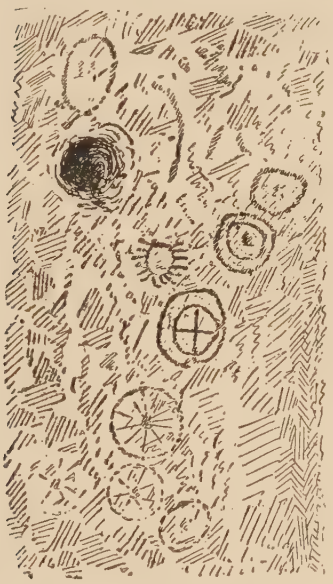

Fig. 48.—Stone 3.

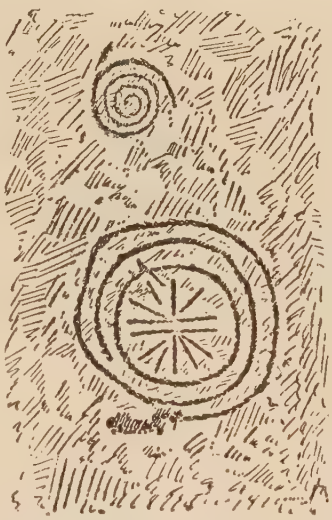

Fig. 49.—Stone 3.

Fig. 50.—Stone 3.

the left of this group, near the ground, is cut the curious rayed figure within a circle, the whole enclosed in a spiral (fig. 49). Above this figure is a small spiral of four turns. The only other examples of inscribed markings in the

chamber occur on the north recess face of this stone (fig. 50). They do not call for special notice; the lines above and below the circle are cut in the soft skin of the stone, not picked. The inscribings at Dowth are in general cut on the weathered surface of the stones, which is rarely picked over as at New Grange. Some few cases of such picking on uninscribed stones are to be found, but it does not form a noticeable feature in the treatment of the stones.

In the circular chamber to the south of the main chamber, but one stone appears to be inscribed—that next the entrance to the inner chamber. It bears a single spiral of four or five turns. The inner chamber is more richly decorated, but also, with the exception of a few insignificant marks, on one stone only. The decorated stone referred to lies on the right hand of the chamber, and measures nine feet by four feet six. A considerable portion of the weathered surface or skin of the stone has been picked over after the manner of the New Grange stones, and on this portion occur some characteristic spirals. On the centre portion of the stone is inscribed a wheel-like figure about five inches in diameter, and to the left of it a small leaf-like figure (fig. 51). These are cut, not punched, on two portions of

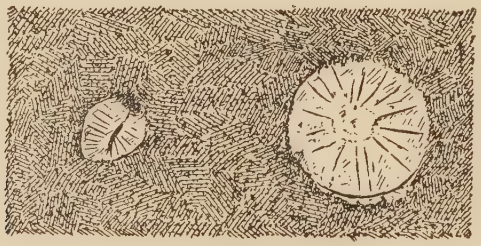

Fig. 51.

the skin of the stone, the surrounding parts being picked over. It is difficult to say whether they were cut on chance patches of skin left unpicked, or were picked round subsequently. At the lower side of the wheel-figure the skin extends a little beyond the circumference, which would favour the first alternative, but the probabilities would appear to be in favour of the second. The same question arises as to the figures and scribblings on the lower portion of the stone (Plate VI., fig. 4). These are cut in the soft

skin of the stone, and at first glance appear certainly later than the spirals and, generally, than the other markings at Dowth. The principal figures consist of a wheel-like figure, similar to that on the central part of the stone, but smaller, and two examples of a cross inclosed within a double circle. Similar figures have been noticed in the principal chamber of the tumulus. These figures seem late in character. The cross in circles, indeed, suggests a Christian emblem, and recalls the cross within a circle on the lintel stone of the Church of St. Fechin at Fore, Co. Westmeath, ascribed to the seventh century, figured in Petrie's "Round Towers," a type which may possibly be traced to Syria. The cross in a double circle is also found occasionally in our illuminated manuscripts; and on the Anglo-Saxon coinages the cross within a double circle is a usual type. But the figures at Dowth may also be said to be identical with some found in conjunction with Scandinavian rock-tracings, ascribed to the Bronze Age.* They are generally assumed to bear a religious significance, though the precise nature of the symbol has not been determined. Whether this be so or not, I think there can be little doubt that, unless ascribed to post-Christian times, the figures inscribed on the stones at Dowth do not possess any religious signification. If the cross within a circle, as used at Dowth, be a symbol, it is plainly a very definite one. It is impossible, therefore, on the supposition that it is a symbol, to account for the entire absence of the figure at New Grange. The motive underlying the association of this very definite figure with the Dowth tumulus would, if symbolic, have certainly determined for it a place amongst the carvings of New Grange, which cannot be much removed in time from those at Dowth. On the whole I am inclined to regard these figures as later than the tumulus, and possibly connected with its subsequent occupation; but the matter is not quite clear owing to the occurrence of similar figures in the principal chamber, and the difficulty in deciding on the question of the picking.

* Inscribed stone at Krapperup, Scania, also well-known dolmen at Herrestrup, in Seeland, &c. See "Report of the Prehistoric Congress," Stockholm, 1874, vol. I.

III.—KNOWTH.

The great tumulus at Knowth, the third largest of the New Grange group, is almost equal in size to that of Dowth. It measures nearly 700 feet in circumference, or about 225 feet in diameter, and between 40 and 50 feet in height. The mound is more regular in appearance, and has suffered less from dilapidation than those at New Grange and Dowth. No trace of base stones is at present to be seen, but possibly they are covered by the sod, which is evenly grass-grown, and makes it difficult to say exactly where the mound ends and the natural slope of the ground begins.

The mound is not open, nor is anything known as to whether it contains a chamber or not. It may possibly prove to be a blind cairn, similar to the largest of the Loughcrew cairns described by Conwell. In the latter case, although the curving inwards of the boundary stones at the east side indicated a passage and chamber, and the cairn had not apparently been previously disturbed at that side, no trace of a passage or chamber was discovered on excavating the cairn.* At the northern side, however, of the mound at Knowth, some large stones showing above the surface of the ground seem to indicate the entrance to the tumulus, and as a cave at Knowth is mentioned in the Annals as one of those plundered by the Danes in the ninth century, it is probable that the mound is chambered. It is to be hoped that no hasty attempt will be made to open this important tumulus, and that nothing will be done in that direction without competent supervision. The flattened form of the top of the mound is very clearly marked at Knowth. A considerable depression exists in the centre portion, which gives, from within, the appearance of a rampart round the margin. A similar formation is found at New Grange. But as these mounds may have been used at various times for purposes of defence, it is not probable that these features are part of the original design.

Some yards to the north of the tumulus at Knowth, several large stones, forming a more or less defined ellipse of about 70 by 30 feet, possibly mark the site of another sepulchral monument.

* Conwell—Cairn "D."

IV.—DATE OF THE TUMULI.

The objects found on and near the tumulus at New Grange do not throw any light on this subject. Lhwyd refers to a gold coin of Valentinian, said to have been found near the top of the mound. Molyneux mentions two gold coins, one of Valentinian and one of Theodosius, as found in removing some of the heap of stones on the outside of the mount. In 1842, a gold chain, two finger rings, and two gold torcs, of rope pattern, apparently of Roman work, were found by a labouring man within a few yards of the entrance to the "caves at New Grange," at a depth of two feet below the surface of the ground. The place where they were found having been further searched, a denarius of Geta and two defaced small brass coins were found.* It is not probable that any of these objects formed part of the treasure which the tumulus may have contained.

Recently the floor of the chamber and passage has been cleared out, but nothing of importance was found among the *débris*. Some animal bones appear to have been the only things noticed. In this respect the chamber has proved similar to that of Maeshow, in which, with the exception of a quantity of bones and teeth of the horse and a small fragment of a human skull, which were found in the *débris*, no relics were discovered.† We are thus thrown back on the ornamentation and construction of New Grange for evidence as to its date.

The transitional, or, if it be preferred, developed character of the monument, has been frequently referred to. Its architectural treatment, the approximation to *design* in ornament, to carving in relief, indicate that the tumulus must be placed late in the series of that class of monuments in Ireland. The introduction of the double or returning spiral, and combination of spirals, as on the entrance stone, point to a date immediately preceding, or within the early stages of, the "Late Celtic" Period, coinciding approximately with the early Iron Age. We may therefore provisionally refer the tumulus to a period towards the close

* "Archæologia," vol. xxx. † Proc. Soc. Ant. Scot., vol. v.

of the Bronze Age, or, more probably, during the overlap of the Bronze and Iron Periods.*

Canon Greenwell places the date of the introduction of iron into Britain at from about two to three centuries B.C.† Sir John Evans estimates the date of its introduction somewhat earlier. He is of opinion that in the southern parts of Britain iron must have been in use not later than the fourth or fifth century B.C.; and that by the second or third century B.C. the employment of bronze for cutting instruments had there practically ceased. In the more northern parts of Britain and in Scotland, he adds, an acquaintance with iron was probably first made at a somewhat more recent period.

In Ireland, which Sir J. Evans conjectures was perhaps less accessible from the Continent than Britain, the introduction of iron may have taken place considerably later; but, he adds, there appears to have been a sufficient intercourse between Scotland and the North of Ireland at an early period for the knowledge of so useful a metal to have been communicated quickly.‡

On the other hand some weight must be allowed to the positive statement of Tacitus in the "Agricola":—"In truth Ireland, as it lies just between Britain and Spain, and is capable of easy communication with the coast of Gaul, would have proved of infinite use in linking together these powerful limbs of the empire. In size it is inferior to Britain, but surpasses the islands in our sea. In soil and climate, as also in the temper and

* Mr. Anderson admits the possibility that the stone-balls, referred to at page 26, may, in some instances, be as late as the Christian period in Scotland. He says: "Whether they belong wholly to the Pagan time, or partly to the Christian period, it is clear that the prevailing feature of their decorations, though distinctly Celtic in character, are not those of the fully developed style of Celtic ornament which prevailed in the early Christian time." He adds, that the zoomorphic ending of the spiral pattern on the bronze example (one example in bronze is known), and the double and escaping spirals of the Towie and other specimens "are sufficiently distinctive to claim for them a place in the same system of design which produced the peculiar patterns of the Pagan period, and developed from them the more elaborate system of decoration so widely applied in the early Christian art of Scotland."—"Scotland in Pagan Times: Iron Age," p. 171.

† "British Barrows," p. 130.

‡ "Ancient Bronze Implements of Great Britain," p. 471.

manners of the natives, it varies little from Britain. Its ports and landings are better known through the frequency of commerce and merchants."*

It is probable, therefore, that knowledge of iron reached Ireland from the Continent independently of Britain.† But the comparative scarcity of objects of the La Tène and analogous types, and the absence of a coinage similar to the pre-Roman types of Gaul and Britain, support Sir J. Evans' general conclusions. A considerable period of overlap intervened in Britain between the true Bronze and Iron Ages. The use of iron moved slowly northward and westward across the country. And even in the southern parts the general substitution of iron for bronze for cutting instruments may be placed as late as the third or second century B.C.

On the whole, although a knowledge of iron may have reached Ireland earlier, I do not think we can safely place an extended use of that metal much further back than the first century of our era, or possibly first century B.C. The full development of "Late Celtic" ornament will be somewhat later.

From these considerations I am inclined to date the tumulus at New Grange approximately about the first century, and, if anything, would be disposed to reduce that limit rather than to extend it. Stone was not in use for purposes of construction except, perhaps, on the west coast, for other than such structures as those under discussion, and it is probable that carving in stone was not so advanced as other arts, and remained in an experimental stage for a considerable time after the technique of other materials was fully understood. I do not think, however, that the date of New Grange can be brought so late as Fergusson, in "Rude Stone Monuments," conjectures, viz. the end of the third century. The ornament preserves too close a contact with that of the true Bronze Period to permit of so late a date.‡

* Gordon's translation.

† See also the chapter on trade-routes in Boyd-Dawkin's "Early Man in Britain."

‡ Any argument based on the discovery of the coin of Geta, on which Fergusson appears to rely, is upset by the coin of Theodosius referred to by Molyneux. I do not know on what authority Fergusson states that a second "similar gold ring was found about the same time in the cell." The *two* rings mentioned in Lord Albert Cunningham's letter, published in the "Archæologia," are distinctly stated to have been found outside the tumulus.

It is much more difficult to arrive at a probable conclusion in regard to the age of Dowth. The evidence of the iron objects found during the excavations in 1847 is discounted by the discovery of the bee-hive cells and passage communicating with the central chamber, and renders it certain that objects of the crannoge type, which would have implied a late date, are a later intrusion. In construction, especially as regards the well-marked feature of sill-stones, Dowth conforms more nearly to the prevailing type of such structures than New Grange, and would be presumably earlier. New Grange representing development. Against this may be set the system of minor crypts and chambers to the south of the principal chamber. The grooved stone at the entrance of the latter would seem to be a late feature. The total absence in the carvings of lozenge, dogtooth, and chevron ornament, so characteristic of the Bronze Period, is also remarkable; but does not furnish any certain footing, as we meet at New Grange distinctly later forms of spiral than occur at Dowth, in association with the earlier forms of ornament. Again, it is difficult to say how far some of what appear to be later forms, such as the circles with cross and wheel-like centres may be contemporary with the original structure. In the cairns of the Loughcrew hills very marked differences exist between the ornaments in neighbouring tombs, and as yet we hardly possess sufficient facts to draw definite inferences. The exploration of Knowth, the third great tumulus on the Boyne, may throw more light on the subject, but it would appear to be probable that no very lengthened period separates Dowth from New Grange. The whole character of New Grange, its architectural suggestion and richness of ornament, would, indeed, seem attributable to individual skill and enterprise, marking the sudden advance of individual genius, breaking the ranks of tradition, rather than separation in time.

V.—HISTORICAL REFERENCES.

Fortunately the more important tracts relating to *Brugh na Boinne*, or *Brugh** as it is generally called, have been translated. Many of the incidental references are also accessible. We thus, with the addition of the "certifying" poems translated in the present chapter, possess in a translated form, I believe, substantially the whole body of the evidence bearing on the question of the identification of the cemetery.

The incidental references are, for the most part, of a fabulous character, and refer to the association of Aengus, son of the Dagda, with *Brugh na Boinne*. Thus, in the *Pursuit of Diarmuid and Grainne*, on the death of Diarmuid, Finn says: "Let us leave this tulach, for fear that Aengus-an-Bhrogha and the Tuatha De Danann might catch us; and though we have no part in the slaying of Diarmuid, he would none the more readily believe us." It is then related how Aengus came and took the body of Diarmuid to the Brugh on the Boyne, saying, "since I cannot restore him to life I will send a soul into him, so that he may talk to me each day." Many other examples of a similar character might be given, but one other, to which Mr. Douglas Hyde has drawn my attention, will be sufficient. In the Fenian story, the Bruighion Chaorthainn, or Fort of the Rowan-tree, of which several manuscript copies of the last and early part of the present century exist, it is related how, on a certain occasion, a poet brought four ranns to Finn, and offered to take as payment for the poem the complete understanding of it. And he put Finn under *geasa* to understand it. The first of these ranns, and Finn's answer, Mr. Hyde translates thus:—

> "I saw a house in the country
> Out of which no hostages are given to a king,
> Fire burns it not, harrying spoils it not:
> Good the prosperity with which was conceived that kingly house."

"I understand that verse," said Finn, "for that is the Brugh of the Boyne that you have seen, namely, the house of Aengus Og of the Brugh, and it

* *Brugh* (in old spelling, *brug* or *brud*) usually signifies a mansion, palace, or 'burg'; also used in a wider sense to signify land, plain, town. See W. H. Hennessy's Introduction to the Mesca Ulad, or the Intoxication of the Ultonians. "Todd Lectures," vol. i., Part I.

cannot be burned or harried as long as Aengus shall live, so there's the explanation of that verse for you," said Finn. "True," said the youth, &c.

These are, of course, of no historical value, but are not without interest as evidence of the persistence of the traditional association of the great mound at New Grange with *Brugh na Boinne*, and the natural centering of the later growths in the myths of Aengus, round that mound as the most important monument of the pre-Christian period in the district.*

The detailed mention of Brugh in the Senchus na Relic, or History of the Cemeteries, of the "Leabhar na h-Uidhri," and in the Dindsenchus, deserve more serious attention. The prose portion of the History of the Cemeteries and prose passages relating to our subject in the Dindsenchus were, fortunately, translated by O'Donovan for Petrie, and are published, with the Irish text, in the latter's "Round Towers of Ireland." It will be sufficient to reproduce here such passages as relate directly to the cemetery of Brugh. It is not necessary to reprint the text already published by Petrie, but in the case of the two certifying poems now included, which have not been previously translated, I have thought it of interest to give the text as well as the translation.

The "Leabhar na h-Uidhri" is a compilation of the 12th, or probably end of the 11th century, and is the earliest of the Irish manuscripts of a non-ecclesiastical character at present in existence. It was compiled at Clonmacnois by Moelmuiri, whose death is recorded in the annals under the year 1106. The tract on the cemeteries is to be referred to a period probably some centuries earlier. It is glossed by Moelmuiri, and his explanations are given within brackets in the translations.†

* O'Donovan, in a note to the "Four Masters" states, that "Aengus-an-Bhrogha was considered the presiding fairy of the Boyne till recently, and that his name is still familiar to the old inhabitants of Meath, who are fast forgetting their traditions with the Irish language."

† "Leabhar na h-Uidhri," fac-simile published by Royal Irish Academy, p. 50. The translations of these and subsequent extracts may be open to revision. In the present state of Irish scholarship it is hardly possible that agreement will be found as to the rendering of obscure passages. But, as my object is mainly topographical, errors are not likely to affect the general sense in reference to the present argument.

After some introductory matter relating to Cormac mac Art, who is stated to have been "the third person who believed, in Erin, before the arrival of St. Patrick," follows an explanation of why Cormac was not buried at Brugh :—

"And he (Cormac) told his people not to bury him at Brugh (because it was a cemetery of Idolaters), for he did not worship the same God as any of those interred at Brugh; but to bury him at Ros na Righ, with his face to the east. He afterwards died, and his servants of trust held a council, and came to the resolution of burying him at Brugh, the place where the kings of Tara, his predecessors, were *buried*. The body of the king was afterwards thrice raised to be carried to Brugh, but the Boyne swelled up thrice, so as that they could not come: so they observed that it was 'violating the judgment of a prince' to break through this Testament of the king, and they afterwards dug his grave at Ros na Righ, as he himself had ordered."*

"These were the chief cemeteries before the faith, viz. Cruachu, Brugh, Tailltiu, Luachair Ailbe, Oenach Ailbe, Oenach Culi, Oenach Colmain, Temhair Erann."

At Cruachan were buried the kings of Tara, of the race of Heremon, from Cobhtach Coelbregh until the time of Crimhthann. It is explained as the reason why they were not buried at Brugh, that the two provinces which the race of Heremon possessed were Leinster and Connaught, and the province of Connaught was the peculiar inheritance of the race of Cobhtach Coelbregh :—

"And whenever, therefore, the monarchy of Erin was enjoyed by any of the descendants of Cobhtach Coelbregh, the province of Connaught was his *ruidles* (i. e. his native principality). And for this reason they were interred at Oenach na Cruachna. But they were interred at Brugh from the time of Crimhthann (Niadh-nar), to the time of Leoghaire, the son of

* Ros na Righ, still known by that name (Rosnaree), is situated on the opposite bank of the Boyne, about half-a-mile above New Grange. Cormac's grave is still pointed out there. O'Donovan, however, does not consider the tradition to have been handed down, but derived from Comerford's History of Ireland. See Ordnance Letters, R.I.A., "Meath—Antiquities," p. 279.

Niall, except three persons, namely, Art, the son of Conn, and Cormac, the son of Art, and Niall of the Nine Hostages."

The reason why Art was not interred there is stated to be, because he "believed" the day before the battle of Muccramma. Niall was interred at Ochain. The final passage in reference to Brugh runs:—

"The nobles of the Tuatha De Danann were used to bury at Brugh (*i. e.* the Dagda with his three sons; also Lugaidh, and Oe, and Ollam, and Ogma, and Etan, the Poetess, and Corpre, the son of Etan), and Crimhthann followed them because his wife Nar was of the Tuatha Dea, and it was she solicited him that he should adopt Brugh as a burial-place for himself and his descendants, and this was the cause that they did not bury at Cruachan."

The preceding passages are certified by a poem ascribed to Cinaeth O'Hartagain (d. 973). The poem presents some difficulties, and is obscure in places, but the accompanying free translation, kindly made by Professor O'Looney, to whom I am also indebted for the transcript of the text, will enable the reader to realize the extent of ground which the cemetery must have covered, and to gather something of its principal monuments. It is introduced by the concluding lines of the prose account thus:

"And it was to enumerate the kings who held Temair after the coming of the faith, who were interred at Brugh, that Cinead Ua Hartagain composed this lay:—

Ón rin a maig Maic ind Óc	Delightful thy condition O plain of *Mac ind Óc*,*
Fairrigud do rót recaib céc	Broad thy ways traversed by hundreds;
Forolgair mor flaithe fir	Thou concealest many a true chief
do aicme ceth rig mó trec.	Of the race of every king of great hosts.
Rot bhecai cath n-ingnad n-án	Thou hast surpassed all wondrous delights
a clár find glan fichtib fluag	O bright clear field where hosts have fought;
a tir ferann fénad feig	O noble grassy warrior land,
a áth n-énach n-indreb núag.	Charming land of streams and islands.

* *Oengus mac ind Óc* or merely *Mac ind Óc:* "Oengus (or Aengus) son of the Young Ones," a name Professor Rhys conjectures probably belonged to a lost pedigree of the god, differing from the one ordinarily given. Aengus is also called *In Mac Óc*, "the Young Son.' Professor Rhys equates the Dagda and Aengus with Cronus and Zeus.—"Hibbert Lectures," 1886, p. 145–7. See also D'Arbois de Jubainville's "Le Cycle Mythologique Irlandais," chap. XII., in which the myths of the Dagda and Aengus are fully discussed.

Teċ Maic ind Óc ór do bind
Fidgda fót fri féle find
Taircet éim or do lind duind
Geill a fidib h-Erenn ind.

The house of the *Mac Óc* is over thy summit,
Royal sod of bright hospitality;
O'er thy noble waters shouts resound,
There are hostages from Erin's Sidh in it.

Ingen Aruind fort lár luind
cáin mal ba molbċaċ in mind
furri rolád in tór tall
ni gand in gnoḃ ór do ċind.

The daughter of Arand in thy noble centre,
A beautiful princess, she was a praiseworthy *Mind;*
Upon her the foreign gold was placed,
Not small her tomb over thy summit.

Aċóu lind find feíc na fian
frit aniár ni tim in gním
co lá bráṫa brígaċ bág
meraid h-i rán ráṫa ríg.

I see the bright flowing stream of the Fians
From the west, [facing] thee, not timid its motion;
To the day of the terrific awful judgment
It will live on the slope of *Rath Righ.*

Lanamain contuileḃ rund
ria caṫ Maige Tured tall
in ben Mor in Dagda Dond
ni buaċnid a n-adba and.

The pair who sleep there
Before Moytuireadh's battle yonder;
The great woman, the royal Dagda,
Their abode there is not despicable.

Cnoc in Máṫái iar na guin
leir fort a bruig breccar graig
a ċnáim ro ċorbai in muir
bia ta Inber Colbṫa cuin.

The hill [mound] of the Mata after having been slain
Is visible on thee, O steed delighting Brugh;
The bone [reef] that curbs the sea,
Whence is called far-famed *Inber Colbtha.*

Seċi bo boadain buain
Or gruaid a liac budi bin
Termond na fian febil feíg
imreid airṫir nemid nair.

Sechi-Bó of enduring *Boadan*
Over the cheek of her smooth gliding face;
The home of the Fians fiercely brave
Occupies the east of that noble eminence.

Hí fertai na Failenḃ fand
ir and ro maiḃeḃ in glond
mor in gnim núaille bo find
eċt Find for fein Luaigni lond.

In the *Fert* [grave] of the *Failend* low
'Tis there the mighty battle was broke;
Great the deed of renown there done,
Find's triumph over the warriors of brave *Luaighni.*

Génair in neot Mellaċ mac Cellaċ
forlat leing for lorc
ba tualnge trebe rot caċt
conappaḃ éc nualle fort.

Mighty the man Mellach son of Cellach,
He plundered the plains against *Lorc;*
He was a mighty ruler of household tribes
Till he died a noble death upon thee.

Abarc braineċ na tor trom
taċaig treċan trom bo find
oṫa Cremṫand Niaḃ co Niall
bá tu relec na fian find.

O copious barc of mighty kings;
Mighty tides frequent thy eminence,
From Crimthan Niad to Niall
Thou hast been the cemetery of the fair *Fians.*

Fintan Feradaċ Feċt Fland
roċeċt do ċalam in trom
Tuaṫal Teċtmar triaṫ ar clanḃ.
fo luing do land leċtaċ lom.

Fintan, Feradact-Fecht-Fland,
Thy clay has clasped the brave
Tuathail Techtmar, king of clans
Are sheltered in thy clean monumental homes.

Feḃelmid Reċtaċ itsím
bá gein glecaċ fri ceċ coir
nibat écradaċ h-í cís
fo ċeil conḃ ceṫċadaċ coir

Feidhlem Feradach, I remember
He was a man of might in every pursuit.
Hostile foes invaded not the land,
Thou has concealed *Conn Cetcathach* the just.

Ní ṫoṙaċt Aṙt aiḋḋle uiṙḋ
immánaiġ ṫeṙṙ luiṙġ ḟoṙ leiṙġ
ṙo ġab liġe n-uaċal naṙḋ
Aṙġ na Laeċ il Luáċair Ḋeiṙġ.

Ni ṫoṙaċt Coṙmac cen lén
ḋeaḋ na ḟiṙinni ṙoḋ ḟír
ṙo ġab ḟoṙṙ oṙ ḃoinḋ báin
ḟoṙ ṙin ṫraíġ ic Roṙṙ na Riġ.

Coṙṙṙi Liṙeċair ḟoṙṫ laṙ
Fiaċṙa ṙáin Roiṙṫine ṙéil
Muṙiḋaċ Tíṙeċ ḋimbṙí
in ṙí Eoċu aṫhaiṙ Néil.

Ní ṫoṙaċt Niall n-uál naḋ ġó
ḋiṙṙan ḋó in ṙian ṙo ṙa
iaṙ n-ḋul ḋo Elṙa ḟo ṙeċt
ṙo ḟeṙ aleċt aíṫ iṫá.

Iaṙṙin ṫanic ṙneṫem ġlan
ḟoṙ maġ Fáil beṙ niṙ bo ṙom
co ḟuil cáċ inṙeilcib nóem
ḋia ṙcaṙaḋ ḟṙi clóen ḟṙi col.

Foċeil cúani colm cáin
amaiġ Maic in Ḋaġḋai Ḋéin
na ḋeṙṙaṫ aḋṙaḋ ḋé móiṙ
anḋṙo ḃóiḃ hi ṫáṫ hi ṗéin.

Iaṫṙom ḋimbúan ṫuṙu búan.
immó ṫeiḋ ceċ ṙlúaġ ṙlán
iaṫṙom ḋoṙṙoġáeḋ a m-béṙ
ṫuṙu ḟoġebu áeṙ án. an .ṙ.

boanḋ baile ṙo ġlaṙ ṙéil
muna ṙeċuṫ la ṙéil ṙláin
Cennṁḋaiṙ ui uábṙiġ uáiḃ
Sen ḃic a ṫuáim immaiṙ áin. an .ṙ.

Conġalaċ Culli Conaṁḋ ṙián
ḋian a builli ḋonḋ a ḋál
iṙ búale ṙanṫoṙ co ṙían
iṙ ṫuáine n-aṙḋóon iṙ án. an .ṙ.

Art of great renown did not come,
He remained southward of the line upon the plain;
He chose a bed new and noble
At *Arg-na-Laech* at *Luachair Dearg*.

Cormac the griefless did not come,
He embraced the truth [faith] which he knew;
He took his abode over the white *Boind*,
Upon the strand at *Ros-na-Righ*.

Cairpri Liphechair upon thy centre,
Fiachra Roptaine, active, conspicuous,
Murideach Tereach, devoid of strength,
And the king Eochaid father of Niall.

Niall of renown not false, did not come,
Woful to him was the expedition on which he went,
After he had gone to the Alps across
His *Leacht* is known in the place where he is buried.

After this the pure faith came
Over the plain of Fail—a usage not ours—
And all are [now being] buried in the cemeteries of saints,
Having been severed from iniquity and from sin.

The graves of nobles brave and gentle
Are on the plain of the son of the invincible *Dagda*;
They worshipped not the great God.
Woe to them—they are in pain—

They are transient, thou art eternal;
With them all hosts are safe.
They, their usage will pass away,
Thou shalt enjoy eternal life—*Delightful.*

Boand is a place most fragrant and conspicuous
Unless you pass it with a closed eye;
Cennandus is a noble journey from you,
Senbac, her tomb is delightful—*Delightful.*
Delightful.

Congallach of *Cul Cunnand*, the warrior,
Fierce his blow, kingly his conventions;
It is a field of noble chiefs of rightful reign,
It is the abode of mighty kings—It is Delightful—
Delightful thy.

At page 38 (fac-simile) of the same Manuscript occurs what appears to be a fragment of the same tract. It includes a poem on the deaths and burials of Dathi and other princes interred at Cruachan (Rathcroghan), ascribed to Dorban, a poet of West Connaught, of whom nothing further is known.

The poem has been translated by O'Donovan, and is published, with the Irish text, in Petrie's "Round Towers." I extract the following passages referring to Brugh :—

. . . . . .

"The three cemeteries of the Idolaters are
The cemetery of Tailten, the select,
The cemetery of the ever-fair Cruachan,
And the cemetery of Brugh."

. . . . . .

"The host of great Meath are buried,
In the middle of the Lordly Brugh ;
The great Ultonians used to bury
At Tailten with pomp."

. . . . . .

The poem is followed by a prose commentary, apparently written by Moelmuiri, from which the following passages are taken :—

"The chiefs of Ulster before Conchobar were buried at Talten, viz. Ollamh Fodhla and seven of his sons and grandsons, with others of the chiefs of Ulster. The nobles of the Tuatha De Danann (with the exception of seven of them who were interred at Talten), were buried at Brugh, *i. e.* Lugh, and Oe, son of Ollamh, and Ogma, and Carpre, son of Etan, and Etan [the poetess] herself, and the Dagda and his three sons (*i. e.* Aedh, and Oengus, and Cermait), and a great many others besides of the Tuatha De Dananns, and Firbolgs, and others. The kings of the province of Galian [Leinster] *were buried* at Oenach Ailbi ; the kings of Munster at Oenach Culi, in Oenach Colman and Feci. The Clann Dedhadh at Temhair Erann. The kings of Connaught at Cruachan *ut diximus.*

"There are fifty hills [mounds] at each Oenach of these : fifty hills at Oenach Cruachan, fifty hills at Oenach Talten, and fifty at Oenach in Broga.

. . . . . .

"It was Flann and Eochaidh Eolach O'Ceirin that collected this account from the books of Eochaidh O'Flannagan at Armagh, and from the books of the Monastery [Monasterboice], and from other select books, viz. from the Libur Budi, which disappeared from the Carcar at Armagh, and from the

Libur Gerr, which was at the Monastery; and this was the book which the student took with him by stealth across the sea, and was never found since. So far the History of the Cemeteries."

Flann of Monasterboice died in 1056; Eochaidh O'Flannagan, Archdean of Armagh and Clonfiachna, in the year 1003, and Cinaeth O'Hartagain, many of whose compositions are preserved, in 973.

The "Book of Ballymote," a manuscript of the 14th century (1391), like the "Leabhar na h-Uidhri," is a compilation from older sources. The following passages from the "Dindsenchus," or "History of Eminent Places," set forth the principal monuments at Brugh* :—

"Of the monuments at Brugh here, viz. the Bed of the daughter of Forann, the monument of the Dagda, the mound of the Morrigan, the monument of [the monster] Mata; it is from its *colpa*, or thigh, Inbher Colptha is called; the *Barc* of Crimthann Nianar, in which he was interred; the grave of Fedelmidh, the Lawgiver, the *Carn-ail* [stone carn] of Conn of the Hundred Battles, the *Cumot* [commensurate grave] of Cairbre Lifeachair, the *Fulacht* of Fiacha Sraiphtine."

This is followed by Cinaeth O'Hartagain's poem, already quoted, (not, however, given in full), after which follows a second prose passage in which the monuments of the Brugh are set forth in greater detail :—

"Aliter, The Bed of the Dagda, first; the Two Paps of the Morrigan, at the place where Cermud Milbhel, son of the Dagda, was born; the grave of Boinn, the wife of Nechtan; it was she took with her the small hound called Dabilla, from which Cnoc Dabilla is called; the Mound of Tresc; the grave of Esclam, the Dagda's Brehon, which is called *Fert-Patric* at this day; [*the Monuments of*] Cirr and Cuirrell, wives of the Dagda; these are two hillocks; the grave of Aedh Luirgnech, son of the Dagda; the Cave of Buailec Bec; the Monument of Cellach, son of Maelcobha; the Monument of the steed of Cinaedh, son of Irgalach; the Prison of Liath-Macha; the

* Fac-simile, published by R.I.A., p. 353. Text and translation of extracts: Petrie's "Round Towers," p. 102.

Glen of the Mata, *i.e.* the monster, as some assert; the Pillar-stone of Buidi, the son of Muiredh, where his head is interred; the stone of Benn, *i.e.* the monument on which the monster Mata was killed; it had one hundred and forty legs and four heads; the Mound of the bones; the *Caisel* [stone enclosure] of Aengus, son of Crunnmael; *Rout sula* Midir, &c."

The foregoing passage is certified by a poem ascribed to Mac Nia, son of Oenna, of whom nothing further is known. This poem is also preserved in the "Book of Leinster"* (1150), and is therefore to be ascribed to a period some centuries earlier than the "Book of Ballymote." The prose and verse passages referred to will also be found in the "Leabhar Hy Maine," or "Book of the O'Kellys," a manuscript of the 14th century, from which manuscript Professor O'Looney has kindly made the following translation of Mac Nia's poem:†—

A ċoemu ḃṙeaġ ḃṙíġ naḋ ḃṙéġ
co ṅaiṁḋiḃ ṅéḃ ṅiġḋa im ṅóċ
an eol ḋuiḃ ṙeaṅċuṙ ġaċ ḋuiṅ
ṙuil ṙunḋ a m-ḃṙuiġ Maic an Óc.

You nobles of *Breg* import not false,
With warlike spears kingly is your line;
Do you know the history of every noble chief
Who is laid here in *Brugh Mac an Óc?*

Ḟeḋaiḋ an ṙíḋ eiṙ ḃaṙ ṙuil
iṙ ḟoḋeaṙc ḋuiḃ iṙ ʇṙeab níġ
ṙo ġniḋ laṙ an n-Ḋaġḋai n-ḋuiṙ
ḃa ḋiṁ ḃa ḋun, amṙa ḃṙíġ

Behold you there the *Sidh*‡ before your eyes.
It is clear to you it is the abode of a king;
Twas built by the stern *Dagda*;
It was a household, it was a *Dun*, great its import.

Ḟeḋaiḋ Imḋai im Ḋaġḋa ḋeaṙġ
ḟoṙṙan leiṙġ ġan ġalma n-ġaiṙġ
ṙoḃ ḟeaṙ ṙuiṙġi ṙaeṙ iaṙ ṙeilġ
ḟoṙ mnai caiṁ ġan meiṙġ ġan maiṙġ.

Behold you the *Imdai* [Bed] of the red *Dagda*
Upon the plain without warlike bulwarks;
He made courtship after chase
With a comely woman without regret or sorrow.

Ḟeaḋaiḋ ḋa ċíċ niġna an níġ
ṙunḋ iaṙṙiċ ḟṙi niḋḋla ṙiaṙ
aiṙm a n-ġenaiṙ Ceaṙmaḋ caem
ḟeḋaiḋ maṙ aen ni ceim cian.

Behold you the two paps of the king's own queen
There behind the *Sidh* looking westward;
On the spot where *Cearmat* the comely was born
Behold that also 'tis not far distant.

Ḋa luiḃ ḃean Mac Namaṫ náiṙ
a n-ḃaiṫ ḟoṙ ċeann ḃaḋa [ḃaġḋai] ḃeim
aġuṙ a cú ma ḋiaiḋ
ġeṙ ba ṫuṙuṙ cian ḋa ċem.

The wife of *Mac Namat*, the noble, went
By appointment to meet the fierce *Dagda*,
And her hound [went] in her following,
Though, a long journey it was for her to travel.

* Fac-simile published by R. I. A., p. 164, continued at p. 211. But omits stanza 10, and order different. † R. I. A., folio 145.

‡ *Sid*, or *Sidh*, was anciently applied to a hill or mound, the interior of which was supposed to be inhabited by fairy-folk, who were called *side* (pron. *Shee-e*). It appears also to have meant a caved hill, and was considered by the late Mr. O'Beirne Crowe to signify a burial-place. See Hennessy's Introduction to "Mesca Ulad."—"Todd Lectures," vol. i. See also Rhys, "Hibbert Lectures," 1886, p. 147.

Do luid Midir a Brig Leith.
Fria tocbail treith taid fria
co tuc Mac in Óic o na athair
co rciath na rgath giar ba rgíth.

Iar sin tugad cialda an cor
in mac dia nae m-bliadna m-bil
go a athair ba cadla gair
dia táig gur an dagdai n-dil.

Do gnith eargnam leir don rígh
irin t-síd fria breagnad m-buan
ir de ata ní ceirt gan rún
Duma an Trirt ar ruil na sluag.

Iar sin dlomair Dagda duir
ar a dun ba budda broin
combai i n-Ochoind feacht co n-uaill
iar n-ochor sluaig iar n-uair oil.

Fearta Easclainni eirm frith.
i teilgdir cearta fir maith
fod co m-balc braind gnim gan cleith
da mac alfraind ba fo naith.

Tan da gnith ruamna dia thiach
for cuanbla cliach agar crích
ba h-ead slóg didail na tuath
mor glanna muad airm a frith

A cir a Cuirel na mná
cia bail ata gan tar dé
in croid maird co toici brath
ní mesra ra cách a n-gne.

Fedaig lid libur ba baid gach bairn
ba feart firain ruaim gan meirg
foirglidir iath n-gaela n-gairg
rith n-Aedha Lurgnaig for leirg.

An eol duib leacht Ceallaig cruaid
co n-uaill eallaig earcha gaeth
atha tre beirt laechda luaith
diambae tuaig for baechla baeth.

In eol duib derc mua alc m-bil
a comarba fil fon mag
ar a n-eirrib lonim luath lid
a ranib dig fia glond n-glan.

In eol duib leacht galda in rig
Cinaetha gan galma grain
tuc buaid a riblacaib frein
do rein Mac Irgail Aigain

In eol duib tria gnimrad n-gaeth
fria fath firglan fidcib thiach
iat n-daeglan i m-badar fceith
Carcair in Leith Macha liath.

Midir went from *Brigh Leith*,
By valiant strides he reached the place
And carried off the *Mac Oc* from his father,
With his shield on his shelter a risk it was.

After this—It was a prudent move
The son was brought, after nine full years—
To his father it was a bold conflict,
To his house to the amorous *Dagda*.

He gave attendance to the king
In the *Sidh* with enduring full allegiance,
Hence it is—'Tis not a matter without secret,
That *Duma an Trist* is there visible to the hosts.

After this the stern *Dagda* banished him
From his *Dun*—it was an oppressive deed;
He was maintained for a time at *Ochand* with esteem,
As an *Othar Sluagh* [camp follower] at another time.

Ferta Easclann, sage, sagacious,
To put the "Tests of true men";
A place of fierce fight—a deed not concealed—
For the son of Alpraind it was auspicious.

When he fought with valour for his chief
On seaboard lands and territories,
His were the troops to avenge the *Tuath*.
Mighty his fame on the spot where he was found.

The *Cir* and the *Cuirel* of the women
On the spot where they stand—'Tis no disparagement—
In fullness there they will survive till the day of doom.
Their condition will not disparage the others.

Behold you, too—'twas admired by all bards.
It was a *Feart*, of true men,—of fame untarnished.
They were *Iath Gaela*'s protection in conflicts,
The *Sidh* of *Aedh Lurgneach* on the plain.

Do you know the *Leacht* of brave *Ceallach*,
Renowned for battle rage, a fierce wind,
He fell by deeds of fiercest valour
When he went on the unwise expedition *Northward*.

Do you know the large, noble *Derc* [grave]
Of his companion which is upon the plain,
From their monuments I proclaim to you
That we knew none better in the breach of battle.

Do you know the foreign-looking *Leacht* of the king
Cinaeth without warlike rampart,
Who brought triumphs from streaming cavalcades,
As stated by *Mac Irgal Aegain*?

Do you know from the deeds [records] of sages,
By the purely faithful testimony of scores of chieftains
Of the fragrant land where shields prevailed
The *Carcair* [cell] of the *Liath Macha*?

In eol duib ecaiḋ ceand a n-gleand
in miḋ Mata Mall roḃiḋ
iar n-imraḋ rloiġ reanġ.
do gniḋ mor do imneaḋ ann.

Do you know the *Ecait* [mound] of the heads in the glen
Of the huge *Mata Mall*, who had been slain
After conflict with valiant hosts;
She caused much of anguish there?

Iarrin tigdair gnim gan cleith
in riġ dia leith o thir toiḋ
do deicrin in Madа muaiḋ
co clanḋ gaḋ nair cruaiġ aḋloiḋ.

After this they used to come—a fact not concealed—
The kings from their respective countries
To view the mighty *Mata*,
Till each noble hero planted there his valour stones.

Clandair duiġi a braiglind rin
romlind for rirae Suiġi Find
fagaib fiaḋ cuibrib na n-gleand
a ceand for nuii memiḋ mind.

They planted there their monumental piles
Till they filled the plains as far as *Suighe Find*;
Lo! before you the fetters in her glens,
And her heads upon the *Nuii Mumad Mind*.

Iar rin lodor Ulaḋ uill
la cubaḋ Cuind ar a ceand
da gleic re neart Mada Mall
co m-bruiḋi a baill for leic beand.

After this the Ultonians went
By order of Conn to meet her,
To combat the might of *Mata Mall*
Till her limbs they burned on *Leach Beand*.

Da riġned leo duma n-dur
domuin for cnamaib ind mil
ba h-e in coror feaḋ co n-uaill
ro ḋeaḋ frra buaiḋ aġar briġ.

They made a large deep *Duma* [Tumulus]
Over the bones of the monster;
It was a slaughter deed of great renown;
It was achieved with victory and valour.

Caireal n-Aengura gan ḋol
airḋear n-Aenlura nod lean
mac Crundmail forfneidfeaḋ
cin dia n-eirib Miḋcorbo mear.

The *Caiseal* of Aengus without reproach,
On the east of *Aenlus* alone it stands;
The sons of Crundmael they followed,
And after them came Micharba the valiant.

Forran roaḋ riġda in gleo
in Mac Oóc cid dia m-bae
dia rabrir ruil miġir muaiḋ.
in fil uaib neaḋ arid ḋae. A ḋoemu.

Upon that line—kingly the expedition—
Came the *Mac Oc*—wherefore did he come
When he broke the eyes of famous *Midir*,
Is there, of you, a man who hath the knowledge,
You nobles of *Breg*.

In the foregoing extracts we find a mixture of mythical and dimly historical persons, which it is not necessary for our present purpose to discuss. Their importance, in the present connexion, consists in that they establish the existence, as early as the tenth century, of a tradition associating Brugh na Boinne, the burial place of the Kings of Tara, with the tumuli on the Boyne.* The association of particular monuments with the Dagda and other of the divinities and heroes of Irish mythology implies that the actual persons for whom they were erected had been forgotten, the

* Without attaching particular weight to the statements concerning Art and Cormac, and the reasons why they were not interred at Brugh, we may legitimately infer that the cemetery was used for the Kings of Tara until the introduction of Christianity in the fifth century, and that it was then abandoned.

pagan traditions being probably broken by the introduction of Christianity. The mythical ancestors of the clans and kings interred at Brugh, which, probably, were even contemporarily associated with the cemetery, no doubt subsequently overshadowed in tradition the actual persons interred there.

When we examine the approximate dates of the kings who come within the dawn of history, said to be buried at Brugh, we find that they are consistent with the probable dates of the monuments estimated on independent evidence.

In the history of the cemeteries, the kings of the line of Cobthach Coelbregh, with the exception of Art, Cormac, and Niall, are stated to have been buried at Brugh from the time of Crimhthann to that of Loeghaire. The beginning of Crimhthann's reign, as supreme monarch, *i.e.* at Tara, is given by the Four Masters as A.D. 9. Loeghaire succeeded to the sovereignty in 429, and was contemporary with St. Patrick. The evidence discussed in regard to New Grange would bring some of the tumuli in question within that period.

The date of the New Grange group of tumuli being approximately established as within the period to which Brugh is traditionally ascribed, disposes finally of objections to their inclusion in that cemetery, and it has been thought more convenient to assume, at the outset, that they formed portion of the cemetery, rather than to enter at once on controversial points, which, as will be shown, seem for the most part to affect the question of the limits of the cemetery, and do not disturb the conclusions of the preceding pages. It will be remembered that one of the "caves" mentioned in the "Annals," as among those plundered in the ninth century, is described as "the cave of Boadan over Dubadh" (Dowth). The reference to Boadan in Cineath O'Hartagain's poem, which appears to have escaped notice hitherto, may therefore be said to settle the question. And a further reference in the "Book of Leinster" connecting Knowth with Brugh, to be discussed presently, is conclusive as to the identity of the monuments under consideration with that cemetery. But as the distinguished Irish scholar John O'Donovan and the late Sir Samuel Ferguson were of opinion that these monuments could not be identified with Brugh, which was to be looked for higher up the river, it is necessary to discuss at some length the

evidence in favour of an alternative site, and objections to that hitherto assumed.

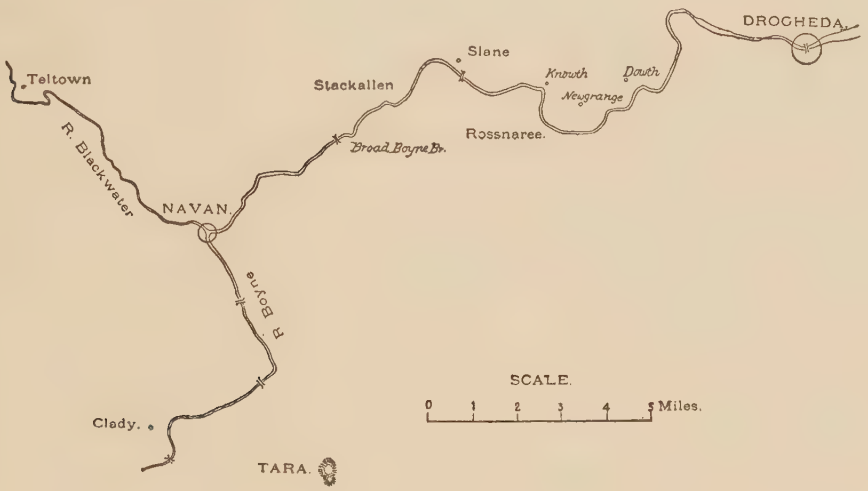

Fig. 52.

O'Donovan, in a note to the "Annals of the Four Masters," places Brugh in the immediate vicinity of Stackallen Bridge, about four miles above Slane. On referring to the Ordnance Survey Letters, I do not find that any decisive evidence is adduced in support of this site.* He conjectures that *Broad Boyne*, the name of the river at that point, was an Anglicised form of *Brugh na Boinne*. Local tradition, he states, associated Brugh with that locality, and adds that the name of the ford before the bridge was built was *Ath an Brogha*, i.e. the Ford of Brugh. That situation he considered corroborated by the relative position of Ros na Righ (Rosnaree), as agreeing with the story of the burial of Cormac in Keating, in which it is related that the body was carried away from its bearers by a miraculous flood, and cast on the shore at Ros na Righ. A point in the river near Stackallen Bridge, called *Lag a righ* (the King's hollow), he conjectures to be probably the spot which tradition had pointed out as the place where the body of Cormac was torn from its bearers. Brugh, he placed on the south bank of the river, where some tumuli appeared to mark its site.†

* In the Library, R. I. A., "Meath—Antiquities."

† Not marked on the Ordnance Map.

An attempt to identify the position of Cletty, where Cormac died, induced O'Donovan to modify some of his conclusions. Cletty, he identified at first with the present Clady, on the north side of the river about a mile from Bective. Subsequently he was satisfied, from examination of the ancient tales, that Cletty was to be looked for in the immediate vicinity of Brugh.* His previous identification, he says, was "derived from vulgar tradition, led astray by similarity, but not identity of name." Finally he placed Cletty on the south side, near Stackallen Bridge, and transferred Brugh to the northern bank. This last location of Cletty he adopts in a note to the Four Masters.

It does not seem to be necessary to seek further for an explanation of Broad-Boyne than the fact that the river is somewhat broad at that point.† Moreover, the distinctive designation *na Boinne* was never used, as O'Donovan admits, except where necessary to distinguish it from some other Brugh, as, *Brugh na Deisi*, and would not have been used locally. Nor do I think further weight can be given to the story of the burial of Cormac (which is clearly a bardic version), than as indicating that Ros na Righ was on the opposite bank to Brugh. If we accept the topographical basis of the story to indicate the traditional situation of Brugh, Rosnaree, which seems the natural crossing point to the New Grange group, and where a ford at present exists, would seem to point to the latter as the probable site of the cemetery. The reference to the burial of Cormac in the "Senchus na Relic" supports this view.

Ath an Brogha, the Ford of Brugh, said to have been the local name of the ford before the present bridge was built, remains then as the one definite point in O'Donovan's argument. It appears to me to be sufficiently explained as indicating what may be called the upper crossing to Brugh,

* See passages quoted by O'Donovan from the "Death of Morietagh More Mac Erca"—thus:

"As Moriartagh (son of Muireadhach, who was the son of Owen) King of Ireland, was in the house of Cletty over the margin of the Boyne at Brugh. Again—"Good was the situation of that house (of Cletty) indeed, over the brink of the salmon-bearing ever-beautiful Boyne, and over the margin of the green-topped Brugh."

† Wilde speaks of the broad reach below the bridge at Stackallen, "where the river well deserves its name of the 'Broad Boyne.'"

the western limit of which, as a district, probably extended a considerable distance above Knowth.

O'Donovan's note on Brugh, already referred to, appears to be contradictory in some of its statements. He refers to a passage in the "Book of Lecan" (1416), in which it is stated that the Dagda Mor and his three sons, Aenghus, Aedh, and Cermad were buried at Brugh na Boinne, where "the mound called Sidh-an-Bhrogha was raised over them."* Notwithstanding this reference to the Dagda, O'Donovan seems to draw a distinction between the monuments at Brugh and those of the Tuatha De Danann. The monuments of the latter, to which he ascribes a remote antiquity, he says, "still remain, and are principally situated in Meath, near the Boyne, as at Drogheda, Dowth, Knowth, and New Grange."

The most ancient authorities distinctly state that the Tuatha De Danann buried at Brugh, and, if we accept the topographical tradition of the manuscripts, it is clearly impossible to exclude the New Grange group of tumuli from Brugh.

I have thought it necessary to examine at some length the evidence adduced by O'Donovan in support of the Stackallen site. His intimate knowledge of Irish topography, and exceptional opportunities, render even conjectures by him of weight. And, on O'Donovan's authority, Stackallen has obtained currency as the approximate situation of Brugh.

The late Sir Samuel Ferguson raised some further objections to the identification of the New Grange group of tumuli with Brugh.† He rests his argument on the insignificance of the monuments at Rathcroghan (Cruchan) compared with those on the Boyne and at Loughcrew, and consequent difficulty in reconciling the latter cemeteries as contemporary with Rathcroghan, the identity of which with Cruchan is considered to be

* The words in the original are :—

Bai tra eochaid ollathair .i. indagda mor mᵉ eladáin mᵉ delbaith ochtmoda bliadain irig in erinn. Is aici ro badur na tri mic .i. aengus agus aed agus cermaid. Is forro na ceathrar rognised erinn sid in broda. Folio 279, p. 6, col. 2.

"There was, moreover, Eochaid Ollathair, *i.e.* the Dagda Mor, son of Eladáin, son of Delbaith, eighty years a king in Erinn. It was he who had the three sons, namely, Aengus and Aed and Cermaid. It is upon those four the men of Erinn made the Sid of the Brugh."

† "On the Pagan Cemeteries of Ireland."—Proc. R. I. A., 2nd Ser., vol. I.

well established.* Ferguson makes an additional point in favour of Stackallen, which it will be best to quote in his own words:—

"In any case we must accept the declivity of the hill [of Tara] on this side [north-western] as the *Fan-na-Carpait*, or 'slope of the Chariots,' which was the Tara terminus of the *Slighe Asail*, or great north-western road. This appears to have been quite a separate highway from the *Slighe Midluachra*, or north-eastern road, which Petrie and O'Donovan agree in identifying with the present highway leading from the crest of the hill opposite the church of Tara by Lismullen towards Slane. The *Slighe Midluachra* certainly passed near Rosnaree and the New Grange group. The *Slighe Asail* as certainly passed near Broad Boyne, Bray Bridge, and Stackallen. But in the *Lebor na h' Uidhre*, in the old tale of the Phantom-chariot of Cuchullin, it is distinctly stated that *Fan-na-Carpait* was on the way to the Brugh of the Boyne. Unless, therefore, Petrie and O'Donovan have been mistaken in giving the *Slighe Midluachra* an independent terminus at Tara, this testimony of the undoubted voice of antiquity would declare that Brugh should be sought near Stackallen, and not in the neighbourhood of the New Grange group of tumuli."

Turning to Petrie, we read concerning the Tara roads that it is "impossible to fix, with certainty, the original names of some of these roads, or to trace their directions till some more distinct evidences have been obtained from ancient sources."† The roads regarded as ascertained with greatest apparent certainty are the *Slighe Mor*, or western road, and the *Slighe Cualann*, or Wicklow road. The others are conjecturally determined. But it is evident that, assuming the directions of the two roads in question to be fairly ascertained, their exact terminations at Tara, or relations to the *Fan na Carpait*, cannot be regarded as fixed. The point raised by Sir Samuel Ferguson (which, by the way, does not necessarily carry the inference he attaches to it, the ford at Stackallen being probably but one

* This objection is incidentally noticed in W. K. Sullivan's Introduction to O'Curry's "Lectures on the Manners and Customs of the Ancient Irish," who remarks: "Perhaps the greater size and splendour of the graves and other monuments in Meath, are characteristic of the *Tuatha De Danann* race, by whom, according to tradition, they were principally erected."—p. 328.

† "History and Antiquities of Tara," Trans. R. I. A., vol. XVII., p. 229.

of the crossing points to Brugh), really turns on how far the "Slope of the Chariots" may have been common to both of these roads entering Tara, upon which we have no certain knowledge.

Moreover, the passage in the "Leabhar na h-Uidri" does not exactly state that the Slope of the Chariots was *on* the *way* to the Brugh of the Boyne Loeghaire, describing the first appearance of Cuchullin says, that as he was a-going over the Slope of the Chariots to the *cnuc side in broga*, he saw Cuchullin traversing the plain before him.* It would appear from this that Loeghaire was at the Tara end of the slope when he saw Cuchullin coming, whom he describes as traversing the plain before him like a heavy fog.

Towards the conclusion of Sir Samuel's paper he appears to have thrown out a suggestion in modification of his previous argument. The inscribed markings on the chambered tumulus at Knock-Many, Co. Tyrone, which he states has been ascribed on seemingly good grounds to the second century, "certainly," he says, "associate themselves in their general character with the groups of New Grange and Slieve-na-Calliagh." Sir Samuel's objections, as he here indicates, really turn on the question of the date of the New Grange group, and, if the general argument of this Paper be accepted, are removed. If the New Grange tumuli are contemporary with Brugh, they must belong to that cemetery.

Having now fully discussed the evidence adduced by O'Donovan and Sir Samuel Ferguson in support of the Stackallen site, the reference to Boadan in O'Hartagain's poem may be recalled, and the passage in the "Book of Leinster" connecting Knowth with Brugh brought forward.

As already mentioned, the Boyne tumuli were plundered by the Danes

* The words of the text are :—

"*am bá-sa em for loegaire oc dul dar fan in charpait do cnuc side in broga hi tulaig in torchomraic im bruig maic indóc conacasa,*" *etc.*

Translated by the late Mr. O'Beirne Crow :—

"'As I was, indeed,' says Loeghaire, 'a-going over Slope of the Chariots to the Hill of the Sid of the Plain, in the Plateau of the Assembly in the Plain of Mac Indoc [Mac ind Óc], I saw,'" etc.

Journ. R. H. A. I., 4th Ser., vol. i. The passage, it will be noticed, is of interest apart from the present reference.

in the 9th century. In the "Annals of Ulster" the incident is recorded, under the year 862, in these words:—

"The cave of Achadh-Aldai, and [the cave] of Cnodhba, and the cave of Fert-Boadan over Dubadh, and the cave of the smith's wife, were searched by the foreigners, *quod antea non perfectum est*, viz. on the occasion when three kings of the foreigners plundered the land of Flann, son of Conaing, to wit, Amhlaim, and Imhar, and Auisle; and Lorcan, son of Cathal, king of Meath, was with them thereat."

In the "Annals of the Four Masters" the same incident is recorded under the year 861, thus:—

"Amhlaeibh, Imhar, and Uailsi, three chieftains of the foreigners; and Lorcan, son of Cathal, lord of Meath, plundered the land of Flann, son of Conang. The cave of Achadh-Aldai,* in Mughdhorna-Maighen;† the cave of Cnoghbhai; the cave of the grave of Bodan, *i. e.* the shepherd of Elcmar,‡ over Dubhath; and the cave of the wife of Gobhann, at Drochat-atha,§ were plundered by the same foreigners."

O'Donovan, who sought to fix the site of Brugh for the Ordnance Survey in 1836, refers to the passages in the "Book of Ballymote," but does not seem to have noticed that several stanzas of O'Hartagain's poem are omitted in that manuscript, including that which mentions Boadan. And when he translated the "Senchus na Relic" for Petrie, the question of Brugh was not under consideration. In his subsequent note to the "Four Masters," published in 1851, he appears to have relied on the matter collected in the Ordnance letters, and so possibly overlooked the line in O'Hartagain's poem—*Sechi bo boadain buain*—which appears to refer to the existence of a

* *The Field of Aldai.* An ancestor of the Tuatha De Danann.—Mac Firbis' Genealogies.

† Mughdhorna-Maigen appears to be a mistake of transcription for Mughdhorna-Breagh. The caves plundered were in one territory, namely, in the land of Flann, son of Conang, one of the chieftains of Meath. Whereas Mughdhorna-Maigen is in Oriel, many miles north of the land of Flann.—O'Donovan, note to the "Four Masters," p. 496. He adds, that these mounds were first identified with the passages in the "Annals" by Dr. Petrie.

‡ *Elcmar*—one of the Tuatha De Danann—Elcmhair-an-Bhrogha.—*Mac Firbis.*

§ Drogheda.

monument to Boadan at Brugh, and thus supplies a link associating Dowth with Brugh.

The reference to Knowth in the "Book of Leinster" is more definite. Strange to say, it has completely escaped notice hitherto. It occurs in a poem containing the dindsenchus of Naas ascribed to Mac Nia. This poem is also preserved in the Books of Ballymote and Hy Maine, where it is preceded by the usual prose account. The prose dindsenchus of Naas, as given in the "Book of Ballymote," concludes thus:—*

Nár dno maċair ibic mac loga agar ir ann adbaċ Nar agar fo adnaċt conid de arberar Nar. Marb iaram ariuir fo ċeb oir. .i. Bui dia cumaid coforadnaċd i cnuce-ba a ut unde cnogba dicitur. i. cnoc bua. Targlaim lug flogu gaidel leir o tailltin co fiad m-brogа do ċaimiud na m-ban sin i Kalaind agurt caċ bliadain conid de bai Narad Loga ut unde Lugnarfad .i. comarc Loga no cuimnigud no aiċmet no feil bair de quibus h carmen dicitur.

Nás now was mother of *Ibich*, son of *Lugh*, and it was here *Nás* died and was buried, hence *Nas* has been so called. Her sister then died at once of grief for her, namely, *Bui*, and was buried in *Cnoc baei* ut unde *Cnogba* dicitur, i. e. *Cnoc-Bua*. *Lugh* convened all the hosts of Erin with him from *Tailten* to the *Brugh*, to mourn those women on the Kalends of August in every year, and hence *Nasad-Loga* ut unde *Lugnassadh*, i. e. the *Comarc Loga* or the commemoration, or the anniversary, or the vigil of death de quibus hic carmen dicitur.

This passage is certified by Mac Nia's poem, which I quote, however, from the "Book of Leinster" as the more ancient authority:—†

dindsenċas nais agas raṫa rond agas raṫa ailella [no aillestair]‡ mac nia cecinit.

DINDSENCHUS OF *NAS* AND OF *RATH RONC*, AND OF RATH AILELL [OR AILESTER] *MAC NIA CECINIT*.

Ruadri mac caitti na nell
nír bo thuaglí thaitiall
cliamuin Loga limb loṅg
congliaid gail gland gona gall.

Rudhrai, son of Cloudy Caith,
He was no mean prop of combat yonder;
The Father-in-law of Lug of many ships,
With heroic valour of battle wounding rage.

Di ingin ruadraċ in rig
bretan na mbrig m-buadaċ m-bán
di mnaoi Loga forlui ár
bui in broga oc nár nár.§

The two daughters of *Rudrai*, the king
Of Britain, of victorious white sails;
The two wives of *Lugh* died there,
Bui of the *Brugh* and noble *Nás*.

* Fac-simile, p. 362.

† Fac-simile, p. 194. I am again indebted to Professor O'Looney for the text and translation of this and the preceding extract.

‡ See Stanza 12, line 2.

§ The "Book of Ballymote" reads *agus nas nar*, adopted in the translation.

Nár maċair ibiċ na n-eċ
oligio a ṗreċ ir a ḋaċ
oċerta co n-gaili gnich
co ferta airbiṫ baile aṫbaṫ.

Nár rogabi gním cen gair
fir cenbáir rorbáiri bár
co n-gluairi imgarg oligeo n-grér
ir uairi ro haimnigeo nár.

Nar lagen co n-glan gart n-glan
ir ann na áonaċt in ben
di maiditir fri derbḃar dein
ni ċeil rein reanċar na fen.

A fiur i cnogba cen ċlói
iar lott a comga fa crínui
nir bumalt marbalt moa mnai
ir ann búi ir roanaċt.

Cnogba cnocc bua na mbág
nir brua fár fnomda fluag
aċt iri in garg maidim ṅ-gním
ir airo ċaṫir na rig rís ruaḋ. R.

Tancatar fluaig gaedel n-glan
do ċaineo na m-ban don brug.
o ṫaltin i tocaib tein
o fein dollotar la lug.

Laiget gair ċaine caċan
na m-bán cen claime cen ċol
reaċt leo a cluċhi cneo
immuċi nir bu mer in moḋ.

Maidiuḋ ir arr rain roár
ní he in raidiuḋ rar rorer
oenaċ tailten talci gleor
lacaċ nantem beor din bér.

Baheḋ narad loga lain
farad rona raim naċ ruail
raidiuḋ finogel ruammaċ rail
cáiniuḋ ingen ruadraċ ruaid. R.

Tri mic toṁċlaim trom tertan
nár roṅcc agar ailertar
riar cen ċairdiu or chuan ċertaċ
tailtiu buan rorbaiderar.

Raṫ i n-ultaib cián in cháin
raṫ coicid ċonaċt combuaid
raṫ coicid lagen cen clái
magen do nár ingin ruaid. R.

Nás was mother of *Ibich* of the steeds,
Entitled from her caste and from her colour—
Since she died of violent deeds—[to be remembered]
That all may know the place where she died.

Nás had taken—a deed not wise—
A man not feeble caused her death
With fierceness in the rage of battle;
From her it is that *Nas* is so called.

Nás of Leinster of the clean band,
It was there the woman was buried;
To her it has been granted by attested story;
'Tis not denied by the history of the ancients.

Her sister, at *Cnogba*, without stain
After the wounding of her strength and heart;
Not a mean corps, great the woman,
It is there she was and was buried.

Cnogba the hill of *Bua* of the battles,
Twas not a field traversed by noble polished hosts,
But it was the deed of fierce forgiving vengeance,
It is the high citadel of the kings—the valour kings.

The hosts of the polished *Gaedhel* came
To mourn the women to the *Brugh*;
From Tailten in bold processions,
Thence they came with *Lugh*.

They raised, each year, the mourning wail
Of the women who were free from stain or sins;
They consummated their *Cluiche Cained* with pain
At early hour—twas no silly state.

It has been proclaimed that from that has come—
'Tis not the silly saying—'tis too well known—
The fair of *Tailten* of great renown,
Still celebrated by all as a rightful custom.

These were the *Nosad* of the fierce *Lugh*,
With auspicious fruits of all autumnal gifts,
The sounding spell-word of pure bright *Fail*,
The *Cainiud* of the daughters of *Rudri Ruad*. R.

The three sons of *Tarclam* of mighty fame,
Nas, *Ronce*, and *Ailastear*;
Westward without stay over the quested harbour
They brought the memorable *Tailten*.

A rath in Ulster a lasting tribute,
The rath of Connaught's province with triumphs,
The rath of Leinster's province without weakness,
Are the Sanctuary of *Nás*, daughter of *Ruad*.
Ruadri.

The foregoing extracts scarcely need comment. Not only in direct statement, but in the reference to Bui as "Bui of Brugh," the traditional association of Knowth with Brugh is definitely established.

Reviewing the evidence as a whole, I think it will be apparent that O'Donovan and Ferguson were led to seek the site of Brugh at Stackallen through the necessity, from their point of view, of distinguishing Brugh from the New Grange tumuli, which they regarded as belonging to a more remote age; and, secondly, from the restricted signification they appear to have attached to Brugh, which they sought to identify with some particular place on the Boyne, rather than as applied to a district of some extent. From the references in the manuscripts, especially in the poems by Cinaeth O'Hartagain and Mac Nia, it is clear that the cemetery covered a considerable space of ground. The existing remains, from Cloghalea to Knowth, extend over a distance of about three miles, and agree closely in character with the general description of the monuments in the "Senchus na Relic" and "Dindsenchus," consisting of mounds, raths, and pillar-stones. This group of tumuli was probably the most important portion of the cemetery, and here, probably, was the place of assembly with which the great rath at Dowth was possibly connected. But how far beyond these limits the district known as Brugh may have extended we do not know. About a mile and a-half north of the mound at New Grange a small caved tumulus is marked on the Ordnance Map, and a couple of miles above Slane another "moat," as these artificial mounds are called, is marked, which may also be sepulchral. Many lesser graves have probably been destroyed or cannot now be traced. Further, in the poems referred to, the expressions, "*Plain of Mac ind Óc* and *Brugh Mac an Óc* appear to be convertible, and such expressions as "steed-delighting Brugh" imply an extensive tract of country. In this view, although as in the case of Cletty, we cannot place too much dependence on local tradition, *Ath an Brogha*, the Ford of Brugh, may indicate, as already mentioned, one of the crossing points from Tara to Brugh, but does not necessarily imply that Brugh extended as far westward as Stackallen.

In conclusion, I have to express my thanks to Professor O'Looney for his great kindness in transcribing and translating the poems quoted in this chapter. These ancient compositions present many difficulties of language, and are often obscure in subject; translation must therefore be, to a large extent, tentative. This consideration increases my indebtedness for assistance so freely rendered.

NOTE ADDED IN THE PRESS.

The carving, fig. 53, was not noticed in time for insertion in the chapter on the inscribed stones at New Grange. It will be found on the horizontal stone immediately above stone 3 in the west recess. A number of lozenges, outlined above the spirals on stone 10, north recess, should also be mentioned. They look, at first sight, like forgeries, but on closer inspection it will be found that two or three of the upper lozenges have been halved and picked in a characteristic manner, so that we have here an interesting example showing how the pattern was first lightly outlined, and then worked upon. Some faintly traceable spirals, at the bottom of stone 3, right side of passage, have likewise to be mentioned.

Fig. 53.

The "Kistvaen," on the west side of the hill at New Grange, mentioned by Wilde, is not marked on the Ordnance Map, but will be found in the adjoining field, about 80 yards to the west of the great tumulus. It is very similar to some of the smaller cairns on the Loughcrew Hills. The boundary circle appears to have been about 35 feet in diameter. The chamber seems to have been square, and the passage somewhat longer than Wilde's estimate. Wilde also mentions the remains "of one of those structures denominated Giants' Graves," a few hundred yards to the outh-east of the mound at Dowth.

EXPLANATION OF PLATES I. TO VI.

PLATES I. TO VI.

NEW GRANGE.

PLATE I.—Entrance of Tumulus.

,, II.—Chamber and North Recess.

,, III.—I. West Recess; II. East Recess.

,, IV.—Roof of East Recess.

,, V.—I. Stone 17, right side of passage; II. Stone 10, North Recess (greatest diameter of figure, 13 inches); III. Stone 2, West Recess; IV. Stone 4, West Recess (extreme length of marking, 10 inches).

DOWTH.

PLATE VI.—I. Part of Stone 4; II. Part of passage, face of same Stone (see page 61, fig. 44); III. Stone 5 in passage; IV. Stone, right side of inner southern chamber.

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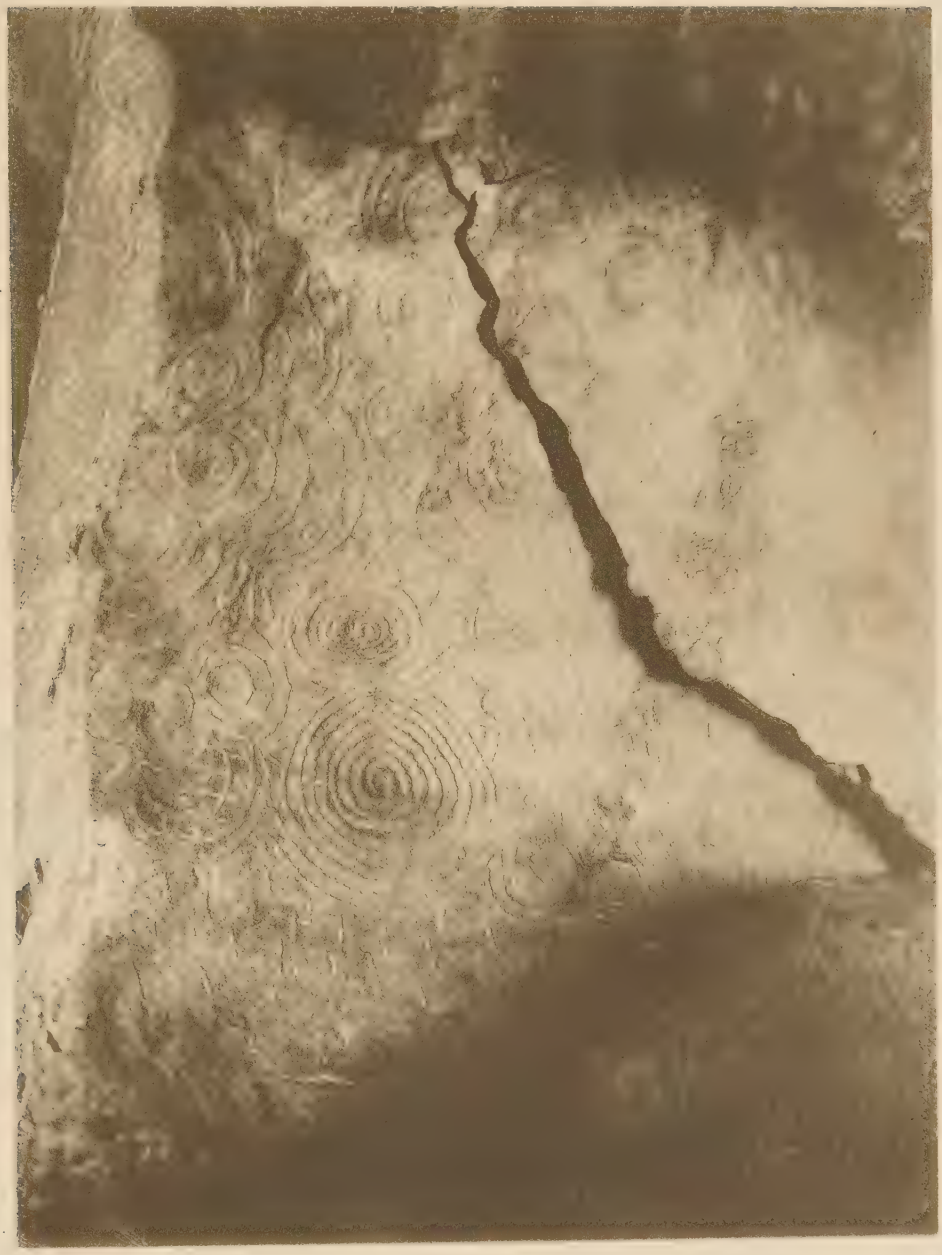

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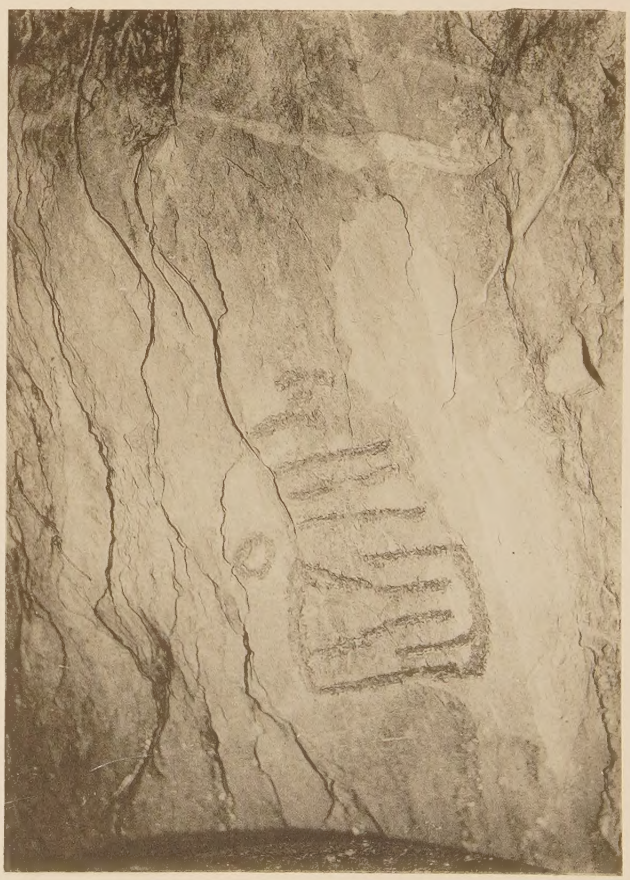

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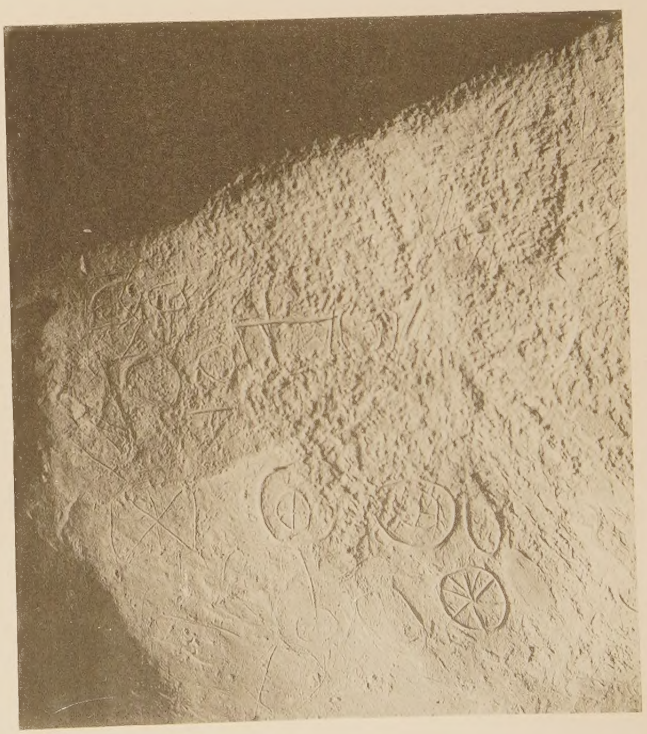

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